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ABSTRACT

A quasi-experimental approach was used to study the effect of different types of summer programs in Alberta (Canada) on the skills and behaviors of severely handicapped children ages 2 1/2 to 18 years. The experimental group, composed of 98 students, were enrolled in 6-week summer programs characterized as high structure (emphasizing specific educational skill and goal-oriented behavioral change), medium structure (mixed educational-recreational), or low structure (recreational). The control group (103 children) were enrolled in no program at all, or in short (2-4 week), primarily recreational summer programs. Data were collected on program characteristics and on child-child and staff-child interactions. The Inappropriate Behaviors Observation Checklist was developed to assess student behavior, and the Teachers' Interview Skills Checklist to assess changes in skill levels. Among the reported results were that programs designated as high structure and medium structure produced the greatest improvement in skills and behavior, with little difference between the two types in terms of results. Recommendations included: (1) the provision of full 6-week summer programs for all severely handicapped children; (2) increased staff preparation; (3) a greater degree of normalization; and (4) a follow-up study to measure retention of skills and behaviors over a longer period of time. (Author/JW)

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SUMMER PROGRAMS

FOR THE

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Interim
Evaluation Report
by
Dr. Louise Zdunich

Prepared under contract
for
ALBERTA EDUCATION
January, 1984

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I am indebted to many people for their assistance in the completion of this research. Without them, this study would not have been possible. Special thanks are due to:

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my sister, Rosaleen Zdunich and my nephew, Jim O'Neill who gave invaluable help in assembling and compiling the data for this report.

ABSTRACT

A quasi-experimental approach was utilized to study the effect of different types of summer programs in Alberta on the skills and behaviors of severely handicapped children. Programs were categorized by their orientation and by their length, resulting in five groupings: six-week High Structure (educational skill and behavior goal-oriented), Medium Structure (mixed recreational and educational), and Low Structure (recreational) Programs, as well as Short Programs (two to four weeks duration), and No Program groups.

Data was collected on various characteristics of summer programs. Observations of the methods employed and interactions among participants were recorded. Data were grouped and percentages calculated for each area under consideration according to program types.

Social validation questionnaires were utilized to acquire information on parent and staff perceptions of program implementation. These items were categorized according to the information elicited and percentages for each group of respondents in each program type were calculated.

Inappropriate behaviors were observed and recorded on a total of 201 children prior to and following summer programs. Adjusted post-program group mean scores were compared utilizing a two-way analysis of covariance (with the pretest scores on the same instrument and age as covariates). Tukey's multiple comparison test was then used for pair-wise comparisons of

groups. In addition, empirically derived expectations (predictions) were established for each child using baseline levels as predictors and post-program levels as criteria. The proportions(%) of children who met, succeeded or failed to reach the expectation was computed and significance of differences between groups were tested using chi square analysis.

Changes in skill levels following summer programs were obtained from classroom teachers who knew the children. Groups were compared on basic skills according to proportions (percentages) of children who regressed, retained or gained in skill performance for each subtest of the instrument utilized to measure skills. In addition, chi square analysis was used to test significance of differences among and between groups in skill loss, retention and gain for each skill area.

Finally, a process-product analysis was undertaken to determine if selected summer program teaching and interaction methods were correlated with changes in behaviors. The Pearson product-moment correlation coefficient was utilized for this purpose.

Results of statistical analysis indicated that programs with a strong goal-oriented skill and behavior change emphasis (designated as High Structure) as well as programs with mixed recreation, skill and behavior emphasis (Medium Structure) produced the greatest improvement in skills and behaviors. There was little difference between these two types in overall skill and behavior retention and improvement. High and Medium

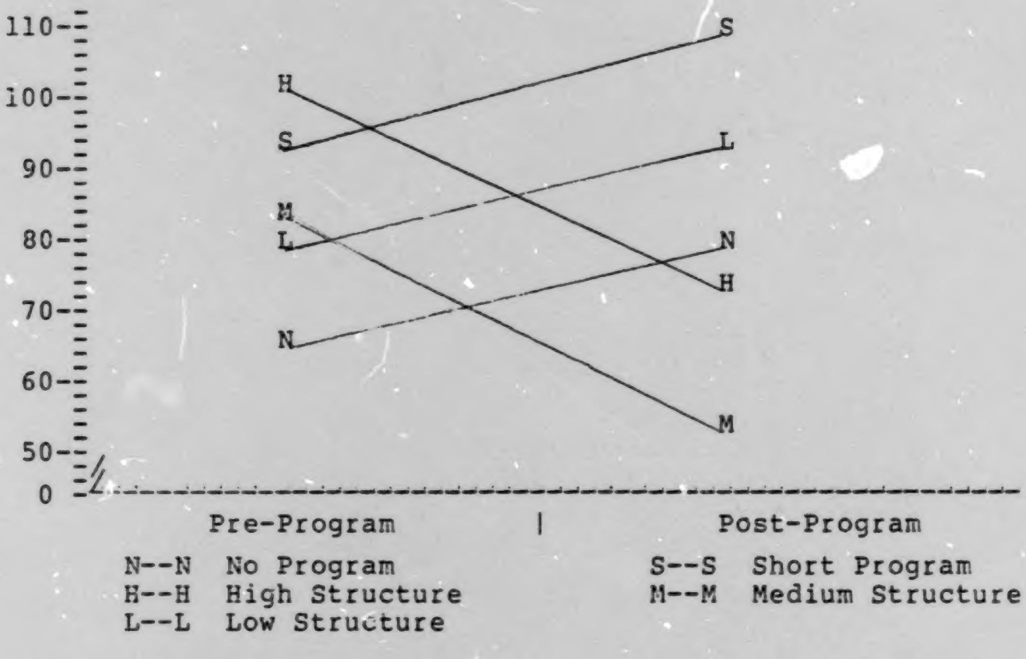
Structure programs were successful in achieving their skill and behavioral objectives, which were specifically measured by this study. However, the goals of these two program types were a continuation, at least to some extent, of school program goals. In addition, they were organized and administered by the same staff who plan school programs for these children.

Such was not the case for recreational programs which were separate from school programs both in organization and in goals. These programs, whether long (Low Structure) or Short programs resulted in regression to more inappropriate behaviors. In addition, there was greater loss of skills in recreational programs than in High and Medium Structure programs. However, since skill and behavior change were not goals of recreational programs, other indications of their success were sought. Children attending no summer programs lost the most skills and also regressed to more inappropriate behaviors.

The chi square analysis of deviations from expected posttest scores for total inappropriate behaviors revealed no significant difference between the Medium and High Structure programs. In the High and Medium Structure groups about nine-tenths of the children had fewer than or equal to the number of total inappropriate behaviors predicted based on their entry level performance while this was the case for less than one-half of the students in the No Program, Short Program and Low Structure Program groups.

The following figure depicts the almost parallel regression (increase in unadjusted scores) in total behaviors for Low Structure, Short and No Program groups, as well as the almost parallel improvement (decrease in scores) of the High and Medium Structure programs.

Total Inappropriate Behaviors: Pretest and Posttest Scores



The process-product correlational analysis revealed that there was a significant relationship between the amount of summer program time that was spent in direct instruction and positive reinforcement with improvement in behavior. The amount of time spent in activities other than direct instruction correlated with an increase in inappropriate behaviors.

Therefore, longer programs with skill orientation helped severely handicapped children retain skills to a significantly greater degree than did the long and short recreational programs with no skill emphasis. In addition, High and Medium Structure summer programs had a significantly greater impact in reduction of inappropriate behaviors than did the recreational Low Structure programs.

The questionnaire responses of parents and staff showed they considered the integrated recreational goal as a valuable one. Although parents agreed to increasing emphasis on skills and behaviors, those whose children attended recreational programs did not want to lose this aspect. There were many comments from parents and staff indicating that severely handicapped children need organized recreation and socialization perhaps even more than non-handicapped children who are able to get these on their own while the handicapped cannot. Therefore, the recreational aspect of summer programs was a positive experience for the children, as evidenced by the highly favorable comments from parents and staff. Integration with non-handicapped children and the community was also viewed by questionnaire respondents as a positive factor in the lives of the handicapped and non-handicapped alike. It can be concluded that, although integrated recreational programs did not improve children's skills and behaviors in the same manner as the more educational programs, they did have positive benefits as measured by this investigation.

This study revealed that certain types of summer programs prevent regression and improve severely handicapped children's skills and behaviors. However, it did not show if these positive effects continue to be evident during the subsequent school year. Further research is necessary on the long-term benefits of summer programming in retention and improvement of severely handicapped children's skills and behaviors.

It is the recommendation of this study:

1. that summer programs for severely handicapped children be funded and continued, at least to the same degree that summer programs are made available to non-handicapped children but that the more specific needs of handicapped children be addressed in these programs;
2. that full six-week summer programs for all severely handicapped students be provided;
3. that increasing emphasis on skills and behaviors according to the needs of each individual child be included;
4. that sufficient funding continue to be provided to allow a child-staff ratio enabling adequate programming for severely handicapped children;
5. that a follow-up study be undertaken during the subsequent school year to ascertain if summer program benefits are long-term and if differences in skills and behaviors immediately following summer programs are retained over a longer period of time.

6. that recreation in an integrated setting supplement skill and behavior goals of summer programs;
7. that increasing emphasis on skills and behaviors be accomplished within the structures of present program organizations without integrated recreation programs having to lose their primary focus;
8. that greater integration with non-handicapped children and the community be mandated for those programs not now integrated, thus providing greater normalization of handicapped individuals, but allowing the degree and manner of implementation to differ according to local circumstances;
9. that greater involvement by parents and other community adults, as well as community organizations be required, not only to supplement the work of staff and provide funds, but also to provide society with the opportunity to develop more positive attitudes towards all individuals and groups who are "different";
10. that university and high-school students continue to be employed;
11. that increased preparation of staff assigned to these children, especially staff lacking in training and experience with severely handicapped children be carried out before programs start;
12. that program organizers, planners and staff become more aware of the most effective methods for learning, particularly in severely handicapped children and the

need to analyze the kinds of activities taking place in their programs in order to utilize those most conducive to helping these children;

13. that program funding be approved early enough to allow for adequate program planning and staff preparation.

Implementation of these recommendations would provide an environment most conducive to the full development of the potential of severely handicapped children. The focus on skill development to produce an individual more independent and more socially acceptable would be complemented by enabling that individual to cope in a larger social context which would become more open to acceptance of the handicapped individual. The increasing independence of the handicapped child and the increasing acceptance by society of individuals who are "different" would produce decreased costs of long-term care and education for the severely handicapped.

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INTRODUCTION

Purpose of the Study

In the spring of 1983, Alberta Education initiated a study to determine the impact of summer programming on severely handicapped children in the province. This department had become involved recently in the funding of summer programs. Therefore, it was felt necessary to explore further the value of summer programs and the need for continued involvement in summer program funding.

Experts and educators in the area of handicapping believe that severely handicapped children regress when there is a prolonged break in programming for them during the traditional school vacation of July and August. It is also their opinion that the greater the handicap, the greater the regression. As a result, when regular programming resumes, the time spent re-learning what was lost prevents the handicapped children from acquiring new learning to the maximum of their potential.

An extensive review of the available research literature by Donna Patterson (see Appendix A) revealed that some research does point to the immediate effects of summer programs. However, there appears to be no research evidence available concerning the long-term effectiveness of summer programs for severely handicapped children.

Extending the school year through summer programming for the handicapped has been advocated, in recent years, to prevent regression and to accelerate learning. Edgar, Spence and Kenowitz (1977) analyzed the results of 18 extended school year programs in the state of Washington and concluded that handicapped children do lose skills over the summer and that extended school year programs can increase children's skills. However, they maintain that the true impact of extended programs can only be measured at the end of the subsequent school year and until that is done, it cannot be ascertained whether or not these programs are truly beneficial.

Kabler, Stevens and Rinaldi (1983) refer to several studies which have reported "significant or substanial gain during summer programs for the full range of handicapping conditions and for all age ranges" (p.109). But they, too, lament the absence of research on the effects of summer programming on performance at the end of the subsequent school year. In addition, they conclude from the literature reviewed, that there is little justification for the "article of faith of special educators" as it is referred to by Larson, Goodman and Glean (1981) "that during the summer hiatus some students - and particularly the more severely handicapped - lose many of the skills they acquired during the regular school year and even worse, they take an inordinate amount of time to recover or recoup those skills when school resumes each fall" (p. 258).

In spite of the lack of direct empirical evidence to support the assumption that summer programming prevents regression or enhances learning, the U.S. courts have ruled that limiting programs for the handicapped to 180 days is in violation of Public Law 94-142. This law requires that each child receive a free appropriate public education, defined as a program of special education based on individual assessments and designed to meet each child's unique needs (Stotland and Mancuso, 1981). Court decisions were based on the evidence of expert witnesses who testified concerning the regression in severely handicapped children and the subsequent time required to recoup these losses.

In recent years, the province of Alberta has begun to provide summer programs for severely handicapped students. In April, 1982, the mandate for this programming was transferred from Alberta Social Services and Community Health to Alberta Recreation and Parks. That summer, this department sponsored 39 programs, while Alberta Education sponsored two and co-sponsored one other with Alberta Social Services and Community Health. Over 550 dependent and sensory multi-handicapped children attended programs in the summer of 1982.

The focus of summer programs under the direction of Alberta Recreation and Parks was on recreation and integration with non-handicapped children and adults. Those sponsored by Alberta Education concentrated on specific skills and behaviors based on the unique needs of each child. Hence, the emphasis of programs funded by Alberta Education was on educational, not recreational goals.

Since the goals and objectives of the two types of programs differed, it is expected that the present evaluation designed in terms of one type of program may not reflect the complementary, but different orientations of other programs. However, U.S. Court decisions and some of the research do not differentiate between and among programs in these ways. Frequently, the implicit assumption seems to be that the same objectives can be achieved by a wide variety of program types.

In the spring of 1983, Alberta Education decided that a study of as many programs as possible throughout the province was essential to address the questions being raised in the research literature regarding the necessity of summer programs for the severely handicapped. Answers are required to provide a rationale for the type and length of programming most suitable for the diverse population of multihandicapped children throughout Alberta, as well as for the type and amount of support needed for these summer programs.

The Problem

The following questions require answers in order to justify extended school programs, i.e. summer programs for the severely handicapped.

1. Do summer programs for severely handicapped children prevent regression to increased inappropriate behaviors?

2. Do summer programs for severely handicapped children produce a decrease in inappropriate behaviors?

3. Do summer programs for severely handicapped children prevent regression in essential skills attained earlier?

4. Do summer programs for severely handicapped children produce an increase in essential skills?

5. What are the characteristics of particular summer programs with respect to their goals, the types of children they serve, the staffing and activities they utilize to implement their objectives?

6. Were program objectives achieved? What were the strengths and weaknesses of programs? What difficulties were experienced?

7. What are the differences in retention of skills and appropriate behaviors between children participating in different types of summer programs?

The present study addressed the questions of regression and learning in a selected number of summer programs. In addition, the characteristics of programs throughout the province were observed and described.

Definition of Terms

Study Subjects

Severely handicapped children were defined as:

1. **Dependent multihandicapped** children who because of the intensity of a combination of physical, mental and/or emotional problems are unable to function without reliance on others for their basic needs,
2. **Sensory multihandicapped** children whose visual and/or hearing impairment may be accompanied by other handicapping conditions to the extent that they require specialized services usually unavailable in programs for handicapped children without visual and/or hearing impairment or in programs designed for children with visual or hearing impairment only (Sensory Multihandicapped Program Planning Project, 1979, p.7).

Process Indicators

Summer programs were defined as extending six or more weeks with the following degrees of structure and types of emphases:

1. **High Structure**, educational (specific skills and behaviors) emphasis were summer programs having objectives of increased skills and decreased inappropriate behaviors according to each child's unique needs, based on individual assessments.

2. **Medium Structure** with mixed, specific skills and recreation emphases wherein the objectives were to provide summer recreation while the the focus continued also on maintenance of skills and appropriate behaviors according to each child's needs.

3. **Low Structure**, recreational emphasis were programs whose objectives were to provide summer recreation with some attention given to pertinent skills and behaviors of handicapped children, when the need arose. An enabling objective for the majority of programs of this type was integration with non-handicapped and contact with the community. Accordingly, outcome objectives included modifying attitudes and behaviors of non-handicapped children and adults in the community.

Short Programs were defined as summer programs two to four weeks long held at any time of the summer vacation period. Goals were similar to those of Low Structure programs, that is, to provide an integrated summer recreational program, with some attention given to pertinent skills and behavior when the need arose.

No Program was defined as child non-attendance at organized summer programs as defined in this study. However, children may have taken part in various summer activities with parents or others.

Summer program characteristics were general program descriptors including: objectives; locale, length and content; characteristics of participants; and observations of activities according to settings, types, methods utilized and child-staff interaction. Social validation by parents and staff perceptions recorded during interviews or by questionnnaires aided in describing and evaluating programs.

Outcome Indicators

Inappropriate behaviors were defined as those measured by the Inappropriate Behaviors Checklist designed for this study (see Appendix B for instruments used). This instrument facilitated recording of behaviors which tend to be characteristic of handicapped children. Such behaviors have a tendency to inhibit learning in a classroom environment and are the focus of educational efforts for these children. They include the following inappropriate behaviors: passive, active, self abusive, personal, repetitive stereotyped, and social behavior.

Essential skills are defined as those recorded by the Teacher Interview Skills Checklist designed for this study. They comprise the basic living skills which are necessary for increased independent functioning in society and are the focus of educational efforts for these children. They consist of the self-help skills of eating, toileting and dressing; gross and fine motor skills; receptive and expressive communication skills; cognitive skills; and the social skills of interpersonal interaction and classroom behavior.

Limitations and Delimitations of the Study

The dependent variables studied were delimited to specific skills and selected inappropriate behaviors, as measured by particular instruments. A limitation in this respect was the lack of a single standardized instrument to assess appropriately the skills or behaviors of this population, which exhibits a multiplicity and diversity of severe handicaps. An additional limitation was a lack of time in the post-summer program period for fall skill assessments to be completed in the schools for utilization in this study.

This study was delimited to a small sampling of each child's behavior. Time constriction in some of the schools did not permit collection of samples of some children's behavior throughout a week or several days, thus ensuring its being a representative sample of the child's behavior.

The study was also delimited for collection of data to programs in Alberta which enrolled sufficient numbers of children to warrant inclusion in the evaluation. It was delimited also to those individuals within each program where consent was obtained from school jurisdictions and parents for inclusion in the study.

The presence of observers in the classrooms may have produced changes in the behavior of the children and the adults working with them.

The independent variables described were the process indicators defined on pages 6 and 7. The characteristics of the various programs were those extant at the time observations were recorded; no experimental manipulation of independent variables could be undertaken.

METHOD

Impact Study of Effect on Children

Identifying Program Groups

Since random assignment of children to various types of treatment and non-treatment groups was not possible, the study utilized a quasi-experimental control group design. Children enrolled in intact groups were selected as subjects. The groups were established by the type of program offered and could be characterized as follows:

1) **No Program** was one control group comprised of children who did not attend an organized summer program as defined in this study;

2) **Short Program**, the second control group, enrolled children for short summer programs of two to four weeks duration.

3) **High Structure** was one experimental group consisting of children attending educational, specific skill and behavior goals-oriented summer programs of six or more weeks duration.

4) **Medium Structure**, a second experimental group, was

composed of children participating in mixed educational-recreational summer programs of six or more weeks duration.

5) **Low Structure**, the third experimental group, was formed of children attending six or more weeks of recreational summer programs integrated with non-handicapped children in a community setting.

Subjects

The population of children from which selections were made for this study could be characterized as follows: severely handicapped children, two and one-half to eighteen years of age who were resident throughout the province. Excluded were totally institutionalized children, that is, those not included in school systems nor in the summer programs being studied.

The final selection of subjects was dependent on sufficient numbers in each location in the province which would permit observations comparable with those in larger centres. It would not have been feasible to spend the same span of time observing children in small and distant points in the province as was possible in the cities. Therefore, subject selection was delimited to the major centres and areas near major centres in Alberta. All available children enrolled in school program locations meeting these criteria were selected for the study.

There were a total of 103 children in the two control groups and 98 in the various program groups making a total of 201 children. The number of students in each group of the study is shown in Table 1 below.

Table 1

Number of Students in Each Population Group

No Program	Short Program	High Structure	Medium Structure	Low Structure	Total
58	45	22	37	39	201

Instruments

A review of instruments to assess skills and behaviors of severely handicapped children revealed that although many published and unpublished instruments exist, most appear to assess only one or few areas of handicap at one time, rather than a diversity and multiplicity of handicaps. Therefore, it was found necessary to develop the instruments to assess the skills and behaviors which received attention in this study.

Instruments for use during summer observation of programs were also developed. Extensive searches for published or unpublished instruments which would adequately describe various aspects of summer programs, including interaction between adults and severely handicapped children did not reveal any which could be used directly.

Assessment of Inappropriate Behaviors

Development of Instruments. To assess behaviors, the Inappropriate Behaviors Observation Checklist was developed in several steps. The first activity was the selection and adaptation of the most appropriate items from various available instruments. Scales utilized were the AAMD Adaptive Behavior Scale for Children and Adults, the Fairview Problem Behavior Record, and A Manual for the Assessment of a "Deaf-Blind" Multiply-Handicapped Child (commonly referred to as The Michigan Manual).

Adapted items were field tested through observation and recording of behaviors of children of all ages with a diversity and multiplicity of handicaps in one of the larger school programs for the severely handicapped. Following field observation, items were refined or eliminated entirely if they did not seem to capture adequately the behavior observed. Revised and new items were added and again field tested by the observers who were to collect study data. Following successive adaptations, the resultant final form of the instrument, the Inappropriate Behaviors Observation Checklist, was utilized for observation in the classroom setting.

This instrument permitted recording a broad sampling of possible behaviors. It was essential to retain this large number and diversity of items in order to properly depict the wide variety of behaviors of children with a great diversity and multiplicity of handicaps.

Definitions of Inappropriate Behaviors

The following items constituted the final form of the Inappropriate Behaviors Observation Checklist utilized in the study. Each type of behavior can be operationally defined as follows:

Passive inappropriate behaviors (PASS) were identified by observing the children in any of the following:

1. inattention to a task or command or to another person evident to the observer by the child's failure to direct attention with any part of body, face or eyes, including inattention evidenced by the child sleeping;
2. non-cooperation or non-compliance observable by child remaining passive or not following instructions;
3. fixed expression, blank stare, mouth open;
4. bizarre body positions with unusual postures whether walking, standing, sitting or lying.

Active inappropriate behaviors (ACT) were observed when the children were engaged in any of the following activities:

1. meaningless noises;
2. constant fidgeting in desk or chair;
3. moving around room with no evident purpose;
4. temper tantrums or hyperventilation.

Self-abusive behaviors (SAB) were recorded when the children performed any of the following:

1. head banging;
2. biting oneself;
3. striking or poking oneself;
4. pulling own hair or ears.

Personal inappropriate behaviors (PER) were labelled as such by observing the children in any of the following activities:

1. undressing at inappropriate times;
2. mouthing objects or fingers or chewing on tongue;
3. drooling, spitting, or grinding teeth;
4. tongue thrust.

Repetitive stereotyped behaviors (REP) were indicated by recording children in any of the following behaviors:

1. repetitive hand movements as flicking or finger postures;
2. excessive head movement in repetitive manner;
3. limbs in motion such as kicking, flailing;
4. body in motion such as rocking, twirling;
5. self-stimulation with the hand as rubbing, scratching, poking or slapping (less abusive than in self-abuse).

Interpersonal inappropriate behaviors (INT) were identified by observing the child exhibiting any of the following behaviors towards adults or other children:

1. annoying others such as pushing, teasing;
2. abusing others as hitting, kicking, throwing objects;
3. physical contact as hugging at inappropriate times or tactile defensiveness, i.e. not allowing oneself to be touched at appropriate times and in appropriate ways.

Total inappropriate behaviors (TOT) combined the above subscores and provided a summary and global indicator of composite behavior.

Data collection

Study subjects were observed in the classroom setting utilizing the Inappropriate Behaviors Observation Checklist. In order to determine the most appropriate length of observation segment for the occurrence of the selected behaviors in a severely handicapped population, various time periods were field tested. Intervals of 15 seconds of observation of each child were decided upon as most suitable. Each observation period was followed by a five to ten second period for recording.

Each child was observed in 15 second segments of time on a rotating schedule so that samples of behavior could be obtained during various activities throughout the day and week for every child. In this manner, samples obtained were truly representative of the child's behavior in general. A total of fifteen minutes of direct observation time in 15 second segments was obtained for each child.

Reliability of Inappropriate Behavior Assessment

Observers were trained by simultaneously observing the same severely handicapped individuals in a school setting with the principal researcher. Observation periods were followed by discussion of behaviors observed, as well as the understanding of the numerous items on the checklist to ensure that there would be no variation in interpretation. Discussions were followed by additional observation and discussion until all observers appeared to view and interpret behaviors in the same manner.

Interobserver reliability measures were taken twice following the development of the final form of the instrument and the training of observers. One of the checks on reliability occurred just immediately prior to the beginning of observations. The second was two weeks after observations began when a third researcher was hired. Observers spent one day observing together with the principal investigator for each period when data for reliability measures were gathered.

Table 2 summarizes the percentage agreement between pairs of observers.

Table 2

Interobserver Percentage Agreement for Behaviors

Behaviors	PASS	ACT	SAB	PER	REP	INT	TOT
First Measure							
Raters #1 & #2	98	100	100	94	92	100	98
Second Measure							
Raters #1 & #2	92	100	100	73	87	67	88
#1 & #3	82	75	100	91	73	67	78
#2 & #3	75	75	100	72	85	100	88

The range of percentage of agreement extended from 67 percent to 100 percent. The lowest and the highest figures were recorded for behavioral areas where the occurrence of behaviors was infrequent, thus magnifying in percentages very small differences, such as one point. The median was 90 percent agreement. It was concluded that observations and recordings of the target behaviors would be conducted in a sufficiently reliable manner.

Assessment of Skills

Direct assessment of children's skills was not feasible. Time constrictions prevented individual testing because of the slowness of these children to perform a task. Also their natural reticence to respond for unfamiliar persons likely would not have produced results totally representative of their true skill levels. Nor could skill level assessment be obtained through observation. During the brief observation periods, it was unlikely that many of the skills would be displayed by the children and so they could not be recorded adequately from observation data.

Therefore, it was decided that data would be gathered from school records and teachers. In general, records on these children are extensive and assessments are of the highest quality that one could expect on children with such a severity and multiplicity of handicaps.

Accordingly it was felt that this source would provide reliable information on skills of severely handicapped children. School files contain assessments by teachers who know the children, as well as by specialized personnel in the various areas of handicapping conditions. Since the assessments are professionally done, they are objective and give reliable information on skill levels of severely handicapped children.

These appraisals form the basis for individual programming for the children. Therefore, children were to be re-assessed early in the school year. However, time constrictions did not allow fall evaluations to be completed early enough for utilization in this study.

The Teachers' Interview Skills Checklist was an instrument developed in order to obtain information on children's skills. Teachers were interviewed or asked to indicate on this checklist whether the children had lost, retained or gained skills since leaving school in June when they had been previously assessed. Provisions were made to indicate if skill assessment was inapplicable in a particular instance. This could have been the case if that skill was not an objective of programming for that individual, whether it was beyond the child's ability or independent functioning had been achieved.

The general areas of basic living skills which are usually the goal of school programming for severely handicapped individuals were included in this instrument. These skills are the focus of many evaluation instruments for this population group. The aforementioned instruments were utilized as a guide in the selection of skill areas to be considered.

Definitions of Basic Skills

1. **Gross motor** skills include basic control of head and body movements and use of the larger muscles especially of the legs and arms in physical activities;

2. **Fine motor** skills include use of the finer muscles especially of the feet, hands and fingers;

3. **Eating** self-help skills;

4. **Toileting** self-help skills;

5. **Dressing** self-help skills;

6. **Receptive communication** skills, that is, the ability to comprehend communication from others, whether it is verbal or in any of the various forms of non-verbal communication;

7. **Expressive communication** skills, that is, some ability to communicate to others whether in verbal or in any of the various forms of non-verbal communication;

8. **Cognitive** skills which include aspects such as recognition of objects and their functions, memory, matching, classification, sequencing, and problem solving;

9. **Social interpersonal interaction** skills, that is the ability to relate to and interact with other children, with family and with adults;

10. **Classroom behaviors** including attentiveness, cooperation, initiative, and independence.

Summer Program Characteristics and Implementation

Identifying Summer Programs

All summer programs throughout the province which included severely handicapped children from two and one-half to eighteen years of age were the population for this portion of the study.

Identification of programs operating in Alberta was through the assistance of sponsoring government departments, particularly Recreation and Parks which funded the majority of these programs. In addition, others sponsored by outside agencies were discovered through word of mouth.

All summer programs were categorized for purposes of further description by their length and their primary goals of integrated recreation or education (skill and behavior change) or a combination of these two, regardless of the degree of combination, as previously defined.

Instruments

Standard methods were necessary to record observation data to be gathered on summer programs to ensure uniformity among three observers. Instruments to accompish this were developed and prepared especially for this study.

A search of the literature to locate suitable observation instruments revealed one study of selected programs throughout the entire U.S. However, these were not summer, but rather regular year, and often, residential programs for handicapped, including those who were severely handicapped. Nevertheless, the Abt Associates Assessment of Selected Resources for Severely Handicapped Children and Youth (1976), as well as Klaber's 1969 study of institutions were very useful in developing instruments and procedures for recording descriptions of summer programs.

Description of Summer Programs

This portion of the study took the form of descriptions of the variety of summer programs for severely handicapped children throughout the entire province of Alberta. Visitation to programs, observation and recording of characteristics, processes and procedures took place during the months of July and August, 1983.

Development of instruments. Items from the Abt Associates study concerning characteristics of programs and observation of client-adult interaction were selected and adapted to be more suitable for a study of summer programs.

Interaction observation items were field tested in a school program which was to function, in a somewhat similar fashion, as a summer program for the summer of 1983. This was done to ascertain if item format and observation timing suggestions were suitable. Further revision was followed by additional field testing until both format and timing apppeared to be suitable.

The final form of the instrument utilized for observation of summer programs consisted of a program description interview checklist and an interaction observation schedule.

The Program Description Interview Checklist consisted of the following descriptors:

1. program orientation objectives and goals;
2. program content and length;
3. facility location, adequacy and appropriateness;
4. availability and adequacy of materials;
5. staffing, including volunteer and parent participants;
6. severely handicapped participants by numbers, age, sex, degree of handicap and living accomodation;
7. degree of integration by activities and numbers of non-handicapped summer program participants;

The Interaction Observation Schedule included items to record child and adult interaction level. In addition, activities were designated according to setting and type, as well as methods of instruction being used when observations took place. The latter were adapted from the studies by Abt Associates and by Repp, A. C., Barton, L. E. and Brulle, A. R. (1981).

Children's interaction levels and types were observed for any of the following:

1. **positive inner-directed activities**, which were defined as actions in which the child was involved in some form of self-care such as eating, toileting or dressing;

2. **negative inner-directed activities**, consisting of self-stimulatory actions, sleeping, remaining inactive or in any of the other self-involved inappropriate behaviors described earlier;

3. **positive outer-directed responses** to objects or activities or to people, including responses to direct instruction;

4. **negative outer-directed responses** to objects or activities or to people such as destruction, aggressiveness, rejection, resistance and withdrawal;

5. **independent initiation or continuation of activities** alone or in groups.

Staff interaction types and levels were categorized as follows:

1. **setting-oriented activities** consisting of basic care of the children orcommunicating with other adults, as well as preparation of materials, reports or food;

2. **outer-directed general activities** consisting of working directly with the children in tasks such as supervision, organization, play, conversation,

listening or responding, but not including formal teaching;

3. outer-directed formal instruction;

4. positive and negative reinforcement.

Staff outer-directed activities were further categorized by methods used consisting of the following:

1. verbal or nonverbal communication without physical assistance given;

2. verbal or non-verbal communication with accompanying physical assistance;

3. physical assistance or manipulation without preceding or accompanying verbal or nonverbal communication.

Data collection of salient features of summer programs was accomplished through interviews and observations. During the months of July and August, summer programs throughout the province were visited by at least one of the researchers. Observers spent at least one hour in each program interviewing and observing. The two-fold purpose of these visits was to obtain information from program directors and/or staff regarding various characteristics and aspects of programs, as well as to observe directly how programs were implemented. It is assumed that the aggregation of this information provided an accurate representation of particular types of programs across the province.

Observers collected descriptive information on programs by interviewing one individual responsible for the program in each centre and recording responses on the interview checklist developed for that purpose. Discussion was not limited to program directors but involved staff as well, depending on local circumstances.

Staff-child interaction data was collected by observation during activities and and recording of interactions on the observation schedule prepared for this purpose. Observations took place on a rotating schedule between children and adults in five-second intervals. Observers decided on a sequence which would facilitate individual observations, depending on the structure of activities being observed. Then, for example, designated child #1 was observed for five seconds, followed by a brief recording period; then staff #1 was observed for five seconds, followed by recording of observations; then, child #2 and staff #2 were observed, consecutively and recordings made; other individuals present were then observed in a similar sequence. Observers then moved to other activity locations in the same program to continue observations. If few staff and few severely handicapped participants were present, the observations were repeated on the same individuals. However, no record of individuals was retained other than their staff or child status.

In all, 360 observations, each of five-seconds duration, were gathered in the programs where a large number of staff and of severely handicapped children made this feasible.

However, in rural areas, especially where there were small numbers of severely handicapped children, observations were cut to one-half of that number. It was decided that the shorter total time of observation would give as representative a sample of activities and interactions in small programs as the longer observation time would in the larger programs. Therfore, a total of 30 minutes of direct observation time for quantitative recording took place in the larger and 15 minutes in the smaller programs.

In addition, observers were directed to record any pertinent qualitative judgments at the end of each observation period in one setting or after a particular activity which would clarify or add information to the quantitative data.

Observers were not limited in the amount of additional time they wished to spend observing or talking with personnel of the programs.

Reliability of data collected. All observers were involved in the pilot testing of the observation schedule and subsequent discussion and refinement of items and time intervals. Therefore, observers were fully aware of the meaning of items and the type of behavior which was to be recorded. However, no reliability data on observations was computed. It was gathered as observational data of but a small segment of program time at each location. As noted above, the information accumulated across the province for each type of program is assumed to be an accurate representation of entire program implementation.

Data on characteristics was generally obtained from one individual who was responsible for the program. At times this was the recreational director of the city or town; other times it was an individual from the recreation office who was responsible for summer programming; and in other situations the person interviewed was directly responsible for day-to-day implementation of the program or was one of the principal staff members. Therefore, there may have been some lack of accuracy in details of information received and recorded.

Social Validation of Summer Programs

A second aspect of the study of summer programs was to permit those directly involved with programs to express their perceptions of need for, as well as of success of implementation of summer programs for severely handicapped children. This was accomplished through questionnaires which were distributed to summer program staff and parents.

Development of questionnaires relied to a great extent on one developed and utilized following a summer program for severely handicapped by the Edmonton C.A.P.E. directors in 1982. Items from this instrument were adapted and new items added to suit the needs of a large number and great diversity of programs throughout the province. Because of this variety of programming types, it was necessary to retain a broad spectrum of questions. The result was inclusion of items that were applicable to one type of program or another but not to each and every program.

Construction of questionnaires in a parallel fashion for parents and staff was designed to facilitate comparisons between the two groups. A few items were not directly comparable.

Questionnaires were to be answered anonymously but respondents were asked to indicate their role in relation to the children and the location of the program involved. Respondents were given the opportunity to reply to 17 items on a scale from strongly disagree to strongly agree. Three open-ended statements provided opportunity for additional explanations or comments about programs and their implementation.

Designation of Program Aspects. Parent and staff opinions were sought by specific questionnaire items on the following program areas:

1) need for summer programs in #'s 1, 13, 14 and parent item #6;
2) program goals and objectives in #11 and #12;
3) program planning in #5;
4) program implementation in #'s 7, 8, 17.
5) impact on severely handicapped children in #'s 2, 3, 9,

10 and parent questionnaire item #4;

6) parent involvement in programs by staff questionnaire item #4;

7) staff competence in #'s 15 and 16;

8) staff satisfaction in staff questionnaire item #6.

Data collection. Questionnaires were distributed to program directors, coordinators or staff by researchers visiting programs. They were asked to distribute them to the rest of the staff and to send parent questionnaires home with the severely handicapped children attending programs. In addition, it was suggested that questionnaires be given to parents whose severely handicapped children were not attending programs, when possible.

Staff were encouraged to respond even if they or the children with whom they worked were only indirectly involved with severely handicapped children in the summer programs. Group home/institutional staff were also encouraged to respond for parents when the latter were unavailable. The residential staff were often the only adults working with the child in after-program hours.

Program directors/coordinators were asked to collect questionnaires and mail them to the research director in the envelopes provided. Envelopes were supplied to parents also so, if they wished, they could mail their responses directly.

Reliability of data collected. Questionnaires were given to staff to be distributed to parents of severely handicapped children. The questionnaires did not specify the degree of handicap in order not to offend parents who, at times, are sensitive to having their children designated as severely handicapped. Because it is not always easy to differentiate clearly between the degrees of handicap in children, summer staff may have sent questionnaires home with children who were not severely handicapped. Therefore, responses to parent questionnaires may have come from parents whose children were not severely, but rather moderately or mildly handicapped.

Summer staff were encouraged to respond to questionnaires even if their involvement with the severely handicapped children was indirect, as for example, through the normal children with whom they worked. Therefore, there was no definite indication as to the degree of involvement with programming for severely handicapped children by staff who responded to the questionnaires.

However, the majority of children, and therefore, the majority of parent responses, came from programs which enrolled severely handicapped children exclusively. Therefore, it is assumed that most responses are from parents and staff who were involved with this type of child, directly or indirectly.

Procedure

This study was carried out in four parts:

1. The first portion of the study consisted of preparation of materials, training of observers and selection of study subjects.

2. The second phase included the collection of baseline (pretest or pre-program) data on all possible study subjects.

3. The third section of the study was comprised of gathering information on summer programs throughout the province.

4. The fourth component was collection of post-test (post-program) data following summer programs.

Preparatory Phase

Identifying subjects. Information regarding projected program locations for the summer of 1983 was obtained from Alberta Education and Alberta Recreation and Parks at the end of April. Telephone contacts were made with local organizations responsible for summer program planning throughout the province to inform them of the study and to obtain pertinent information. In addition, some contacts were made in person. Information obtained from these sources served as a basis for selecting locations enrolling sufficient numbers of children to enable researchers to visit twice for collection of data on children as well as once in the summer to view programs.

It was necessary to collect pre-program data on children before school terminated in June. Therefore, letters (see Appendix C for preparatory correspondence) were mailed to school jurisdictions requesting access to their schools for observation and assessment of severely handicapped students.

Locations initially chosen as possible study subject areas were those included with the letter to school jurisdictions. Several of these locations were omitted in the final selection because of distance and small numbers of severely handicapped children.

Letters were also sent to parents through the schools requesting permission to allow their severely handicapped children to participate in the study. These were accompanied with provision for returning a signed statement. Only those children with school jurisdiction and parental permission were subjects for the study.

Preparation of materials. In early May, a review of research literature revealed no single instrument suitable for assessment of impact of summer programs on severely handicapped children. Neither was any type of instrument found which would have been appropriate for observation and description of summer programs in Alberta. Therefore, all the instruments used in the study were prepared by the principal researcher through adaptation of materials available in areas pertinent to both major sections of this study. These were field tested in one of the larger school programs enrolling severely handicapped children of all ages and all types of handicaps. Following field testing, further revisions were made and field tested again until a satisfactory instrument resulted.

Personnel. Two research assistants, one from Calgary for the southern areas and a second from Edmonton for the northern areas, were hired in May for observation of children in the schools. They participated in the field testing of instruments and in subsequent revisions. This allowed them to become familar with behaviors to be observed and use of the instruments, thus facilitating training. Observer reliability data was collected at the end of May.

Because of unexpected delays in gaining access to the schools and children, a very limited time remained to collect data before school closure in June. As a result,it was necessary to hire a third researcher in the middle of June. At this time, researchers were again brought together for a day of training. This was followed by a second reliability check.

Collection of Baseline Data

Because it was not possible at this stage to know which children would be in summer programs and which would not, it was necessary to collect baseline data on all children to whom access was available. Therefore, observers spent the entire month of June collecting data on skills and behaviors of all available children. Data was collected on a rotating schedule so that each child would be observed in a variety of activities at different times of day throughout the week in order to get a representative sample of behavior.

Summer Program Description

Observation of activities took place in July and August during visits to almost all summer programs throughout the province. Collection of other pertinent information was attained through interviews and casual conversation.

Parent and staff perceptions of various aspects of programs in the form of questionnaires were collected during follow-up visits of programs. In rural areas where a second visit could not always take place and personal collection of questionnaires not always possible, staff were asked to mail these in the self-addressed envelope provided for this purpose. As each parent was provided with an envelope also, they were able to exercise this option, if they so chose. All questionnaires not personally collected were received by mail in August and September.

Collection of Post-program Data

Post-program observation of behaviors was gathered towards the end of the summer program in August. This was done in programs that were somewhat structured, thus making this type of data collection possible. However, in recreation programs because this would have been difficult to do, post-program data were not collected at this time. Instead, behaviors of these children were observed and recorded when they returned to school in September. Behaviors recorded immediately following summer programs may have differed somewhat from those recorded in September. Nevertheless, it was decided that this was the only feasible manner for the research assistants to have sufficient time to collect data in the fall. Collection of data was completed by the end of September.

Statistical Procedures

Impact Study of Effect on Children

Two types of analyses were undertaken to ascertain effects of summer experiences between and among groups on inappropriate behaviors.

1. A two-way anlysis of covariance was utilized for comparisons of adjusted post-program levels (posttest scores).

Scores were adjusted to control for initial differences among groups on entry to the summer program. With the pretest scores on the same instrument and age as covariates, this analysis was performed on each subtest as well as on the total behaviors of the Inappropriate Behaviors Observation Checklist. Tukey's Multiple Comparison Test was then utilized for pair-wise comparisons of groups.

2. Empirically derived expectations (predictions) were established for each child on each behavior. This was accomplished by generating regression equations with the baseline behavior levels used as predictors and the posttest (post program) level as criterion. The proportions (%) of pupils who met, succeeded or failed to reach this expectation was then computed and significance of differences between groups tested using chi square analysis.

Groups were compared on basic skills according to proportions (percentages) of children who regressed, retained or gained in skill performance for each subtest of the instrument utilized to measure skills. In addition, chi square analysis was used to test significance of differences among and between groups in skill loss, retention and gain for each skill area.

Program Implementation Processes and Procedures

All summer programs throughout the province were analyzed and categorized to fit program types previously designated in this study and on which individual student data were gathered. These consisted of high, medium and low structure programs, as well as short programs and no program, where this last category was applicable. All descriptive data, including observations, were then grouped according to the information provided and by type of program. Percentages were calculated for each area under consideration by program types.

Social validation questionnaire (parent and staff perceptions) items were categorized according to the information elicited. Percentages for each group of respondents in each program type were calculated.

Process-Product Analysis

Finally, a process-product analysis was undertaken tp determine if selected program interaction emphases (staff's and children's activities) were correlated with changes in children's post-program inappropriate behaviors. The Pearson product-moment correlation coefficient was utilized for this purpose.

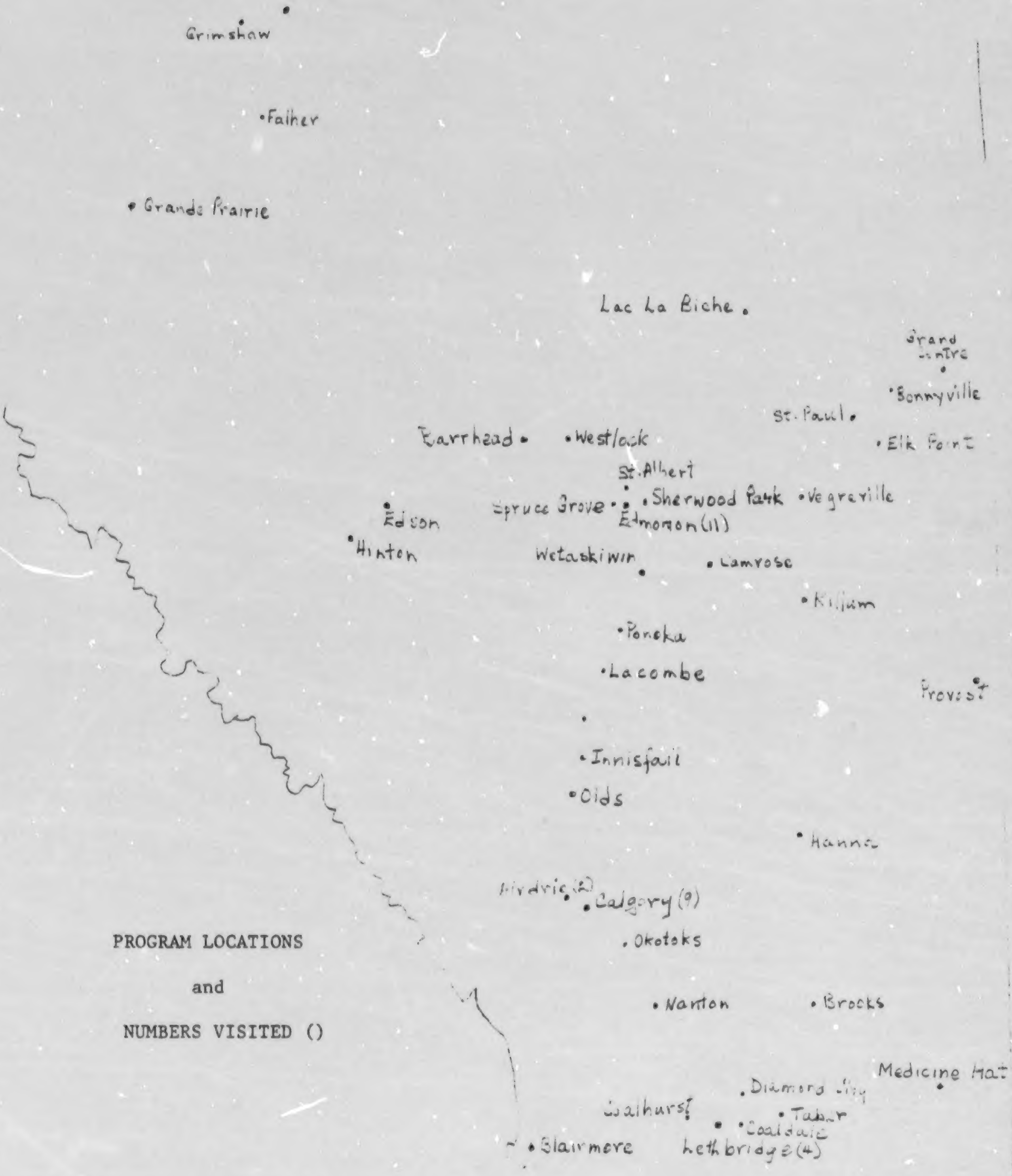
RESULTS OF THE STUDY

Summer Programs: Characteristics and Implementation

The purpose of this portion of the study was to describe the variety of summer programs for severely handicapped school-age children throughout the entire province. In order to carry out the study of summer programs for severely handicapped children, researchers conducted on-site visits, interviewing directors and/or coordinators of programs and observing, recording and analyzing activities in programs.

During the course of the summer, 60 programs operated by 48 local groups were visited for a total time of more than 100 hours. A minumum of one to two hours was allotted for each program location, with actual length of visits determined by local circumstances. The map on the next page indicates locations of programs visited and numbers of centres at each.

To facilitate observations and descriptions, an interview form and an interaction observation schedule were developed and utilized. Besides the collection of quantitative information, qualitative observations were also recorded. In recreational-oriented programs in rural areas and where there were few severely handicapped children, qualitative recording was generally more feasible. At times, this was the only possible type of recording of observations.


Grimshaw
Falher
Grande Prairie
Lac La Biche
Grand Centre
Bonnyville
St. Paul
Elk Point
Barrhead
Westlock
St. Albert
Spruce Grove
Sherwood Park
Vegreville
Edson
Edmonton (11)
Hinton
Wetaskiwin
Camrose
Killam
Ponoka
Lacombe
Provost
Innisfail
Olds
Hanna
Airdrie (2)
Calgary (9)
Okotoks
Nanton
Brooks
Medicine Hat
Diamond City
Coalhurst
Taber
Coaldale
Blairmore
Lethbridge (4)

PROGRAM LOCATIONS

and

NUMBERS VISITED ()

Complete data was not available for all programs visited. In two programs directors were not available at the time of visits and all summer program participants were away at recreational activities in another town. In seven other programs, no observation of activities took place because the severely handicapped children did not take part in the entire program and were not present that day or because there were no severely handicapped in those particular programs. In addition, three or four programs were missed entirely because they were unknown to the researchers.

Program sponsorship in all but eight of the 60 programs visited was by Alberta Recreation and Parks. Two programs were funded by Alberta Education and these two, as well as one other, were extensions of school-year programs. Three were basically residential programs and two were pre-school programs. One program was sponsored by a local association for the handicapped. Most programs received additional assistance from their local authorities, who are encouraged to participate and assist in program implementation by the Recreation and Parks Department.

Instruments developed for this portion of the study were the following:

1. Program Description Interview Checklist for directors or coordinators regarding various characteristics of their programs;

2. Interaction Observation Schedule for recording of child and adult interactions, as well as type and setting of activities observed;

3. Parent and Staff Questionnaires (social validation) for obtaining perceptions of the need for summer programs for the severely handicapped and the success of implementation from consumers of the service.

Goals and Obectives

The majority of summer programs for the severely handicapped in the province were sponsored by Alberta Recreation and Parks. Two processes were mandated by this department for the programs: recreational activities and integration with non-handicapped children and the community. In its 1983 Guidelines for programs, this department stated that programs funded by them are to "be based on the principles of recreation and play" and these were to be given "priority". Programs were to provide "some opportunity for either physical and/or social interaction" with non-handicapped children. In addition, activities were to be "appropriate to the ages and interests of the participants and should allow the opportunity for participation based on ability" (p.15). Program organizers were, therefore, to provide for the development of the child according to age and ability, within an integrated recreational setting in a normal environment. Recreation and Parks' program focus appears, thus, to emphasize and explicate processes rather than outcomes. These recreational programs (six or more weeks in length) have been defined in this study as Low Structure programs.

Summer programs for the severely handicapped sponsored by Alberta Education, however, tended to be goal, rather than process, oriented. These programs focused heavily on individual skill development and behavior management according to the needs of each child, based on individual assessment. Recreational activities and integrated settings received relatively little emphasis. These educational programs (six weeks or more in length) have been designated in this study as High Structure programs.

Both types of programs seek the good of the severely handicapped child. One attempted to promote change in an individual, but the Recreation and Parks programs included intentions to change society. One approach attempted to widen the child's horizons by providing the possibility of as many experiences as are available to the normal child. The Alberta Education programs focused on skill development and attempted to produce an individual more independent and more socially acceptable. But having gained the skills, the individual must have a larger social context than immediate family and helpers. Therefore, educational and recreational programs are complementary and both are needed by the handicapped and the non-handicapped child and by society.

Program implementation was partly determined by local needs and circumstances. Therefore, not all programs were purely educational or purely recreational. They ranged from those having three-quarters educational emphasis to those with three-quarters recreational emphasis. These have been considered Medium Structure with mixed educational and recreational emphasis.

Data was collected during on-site visits on 48 Recreation and Parks programs, on two funded by Alberta Education and one another jointly funded by the two departments. In addition, two programs, not funded by either of these departments were included in data collection.

Priority objectives were sought through the Program Description Interview of program directors. More than one-half of all programs deemed their goals to be basically recreational in nature. Two had educational objectives as their primary focus, that is, their goal was the development of basic skills in the child. In the programs that were reported by directors as being both educational and recreational, there were varying degrees of mixture. Of the 21 mixed programs, 12 focused primarily on recreational goals, with about 25% educational goals; two programs had education as their primary goal with about 25% recreational emphasis; seven programs had about one-half educational and one-half recreational emphasis.

Table 3 gives the numbers and percentages of programs by their orientation either towards education (basic skill and behavioral goals) or recreation. All mixed programs are combined under the mixed category.

Table 3

Program Goals and Objectives

Program Types	N	Percent
High Structure (Educational)	2	4
Medium Structure (Mixed)	21	39
Low Structure (Recreational)	30	57

Normalization and integration of the handicapped have been recent goals in society. One of the mandates for many of the summer programs is integration with non-handicapped children. Therefore, information was obtained in this area. About one-half of all programs were completely integrated, that is, severely handicapped children participated, according to their ability, in all or most program activities with normal peers. Children in two programs were not integrated at all. In nearly one-half of all programs, integration consisted of outings and field trips into the community and in six programs, sharing of a few activities with non-handicapped children. Therefore, severely handicapped children in about one-half of all programs were not truly integrated with their peers.

Table 4 displays the numbers and percentages of programs by their degree of integration with non-handicapped children.

Table 4

Degree of Integration with Non-Handicapped

Type of Integration	N	Percent
Most or all activities	26	49
Field trips and camping	25	47
No integration	2	4

Salient Features of Programs

Duration of programs varied greatly throughout the province. About two-thirds of the programs were six weeks or longer. Some programs were organized in short sessions. In some of these children were allowed to participate in more than one session while in others, they were not. Table 5 depicts the numbers and percentages of programs according to these categories.

Table 5

Duration of Programs

Program Lengths	N	Percent
6 weeks or longer, full days	25	47
6 weeks or longer, half days or partial week	9	17
4 weeks in length	3	6
3-week long sessions	12	22
2-week long sessions	3	6
1-hour sessions	1	2

Location of summer programs, according to Alberta Recreation and Parks Guidelines, should be, if possible, "in community-based recreation facilities" (p.15). This designation includes community schools. Most (90%) of the programs throughout the province were based in recreation centres or schools and their adjacent playgrounds. The remainder of the programs were home or group home based. Ten of the school-based programs were in facilities for the handicapped where at least some of the children spent the school year. All but one of the programs reported adequate (based on space) and appropriate (judged by needs of handicapped attending, such as wheelchair access) facilities. Four programs indicated that difficulty was experienced in obtaining sufficient materials for implementation of programs. Table 6 details information on location of programs.

Table 6

Location of Program Facility

Location	N	Percent
Recreation complexes	25	47
Handicapped school facilities	10	19
Other schools	10	19
Homes or group homes	5	9
Other	3	6

Staffing in more than one-half of the summer programs consisted of summer-only employees, that is, university and high school students. Of the remaining number of programs which were staffed by working adults, 9 were staffed, almost entirely, by those who had worked with most of the same children during the school year. Over 80% of the staff were female. About 60 volunteers, often parents, offered their assistance in the various programs. Some 20 programs reported parent visits. In general, the staffing pattern for severely handicapped was a ratio of one adult to two children. However, in some instances, one adult worked exclusively with one child. Table 7 displays numbers as ascertained by interviews.

Table 7

Staffing Patterns

Staff	N	Percent
Full-time working adults	14	26
Summer-employed students	34	64
Mixed: adults and students	5	10
School-year staff	9	17

Note. Columns total more than 100% because the last category includes members of other categories,

Program participants consisted of about 700 handicapped individuals, including severely, mildly and moderately handicapped. There were about the same number of non-handicapped children, mostly pre-teens.

Since not all programs were integrated, many programs had small numbers of handicapped with large numbers of non-handicapped children. This was the case for most rural area programs. Therefore, a small number of programs had large numbers of severely handicapped children and no non-handicapped children.

About three-quarters of the handicapped children in the programs viewed were severely handicapped. A slightly higher proportion of handicapped children were male than female, while the opposite was the case for non-handicapped summer program participants. Over one-half of the severely handicapped children lived in their own or foster homes. Excluded from the population for this study were totally institutionalized children, that is, those who did not participate in school programs nor in summer programs which were being studied. Tables 8 and 9 display descriptions of program participants.

Table 8

Program Participants: Percentages of Children

Participant Type	Male	Female
Severely handicapped	19	14
Other handicapped	9	7
Non-handicapped	22	29

Table 9

Living Accommodation for Severely Handicapped Children

Type of Living Accommodation	N	Percent
Own/foster home	262	56
Group home	78	17
Institution	125	27

Description of Program Activities

Intended program content percentages were obtained through interviews of program directors and coordinators. This information was available on 44 programs throughout the province. Omitted in this count are four group home programs which were occupied chiefly in providing basic care. Other programs are not included, either because severely handicapped children failed to attend or circumstances prevented collection of the data. Short programs include one program which considered itself more educational than recreational.

Programs differed in the amount of time assigned to various activities. Three-quarters of the time was designated as teaching time (both structured and through play) by the High Structure programs. However, this dropped to less than one-half in Medium Structure programs, to one-third in Low Structure and one-fifth in the Short programs. Creative arts and outdoor activities (field trips, camping, swimming) were not a part of High Structure programs, while they constituted nearly one-third of the time in Medium Structure, and about one-half of the time in Low Structure and Short programs.

Basic care of the children (feeding, dressing, toileting) as well as therapy was expected to consume from one-quarter to nearly one-sixth of the time in all but the Low Structure programs. This indicates the level of handicap of the children attending programs. Within the Low Structure categorization, many rural area programs were included. Fewer of the most severely handicapped children participated in rural programs compared to the larger centres. Hence much less time was needed for basic care of the children.

Observed activity types and settings were recorded utilizing the Interaction Observation Schedule. Most of the time that High Structure programs were being observed, structured teaching was taking place. Almost one-quarter of the time observed in Medium Structure programs was spent in basic care activities and one-third in play activities. Low Structure programs spent over one-half of the observation time involved in play activities, while in Short programs nearly half of the time observed was spent in crafts.

Program implementation. Were programs implemented as intended? To answer this question information based on observations by the researchers was compared with the descriptions provided by program personnel. Observation data appeared to be generally congruent with the intended program content as outlined by directors and coordinators of programs. Observations of summer programs also verified the general thrust of the programs, whether educational, recreational or mixed. For example, High Structure programs assigned 75% of their time to learning through structured teaching and play, while they were engaged in this activity during 89% of the total time they were observed by researchers. In Medium

Structure programs, 44% of the total time was allotted by programs for these activities and they took place during 46% of the time researchers observed these programs. In Low Structure and Short programs the time designated for these activities was 32% and 20% respectively, while a somewhat larger, 52% and 34% of the time researchers observed programs, staff and children were involved in these activities. This discrepancy for recreational programs was due to time constrictions which made it difficult to observe children in activities such as field trips and camping which were an important part of recreational programs.

Table 10 depicts the comparisons of activities by categories and according to intended percentages of time allotment and percentages of time observed for the various types of program groups. Table 11 gives locations where activities were observed.

Table 10

Intended and Observed Program Content: Percentage of Time

Activity Types	High Structure N=2	Medium Structure N=17	Low Structure N=18	Short Program N=7
	Program Types			
Structured teaching				
Intended	70	12	0	12
Observed	89	13	14	10
Learning through play				
Intended	5	32	32	8
Observed	0	33	52	34
Unstructured play				
Intended	0	11	8	4
Observed	9	15	11	6
Crafts, music, art				
Intended	0	18	32	26
Observed	0	15	16	41
Basic care or therapy				
Intended	25	14	7	20
Observed	2	24	6	9
Field trips, camping				
Intended	0	13	21	30
Observed	0	0	0	0

Table 11

Settings of Observed Activities: Percentage of Total Time

Types of Settings	High Structure	Medium Structure	Low Structure	Short Program
	Program Types			
Classroom	100	45	20	0
Recreation hall	0	14	19	68
Outdoors and pool	0	33	61	26
Basic care area	0	8	0	6

Descriptions of Observed Interactions

Child and adult interaction type and level were determined through observation and recording on the Interaction Observation Schedule. Data in this section depicts activities which took place during program visits by researchers.

Children's interactions were observed for any of the following taking place:

1. positive and negative inner-directed activities,that is, actions in which the child was involved basically with self, such as self-care, self-stimulation, sleeping, remaining in bizarre postures or with fixed expressions;
2. positive and negative responses to direct instruction or to others in any activities;
3. independent initiation or continuing of activities alone or in groups.

In High, Medium and Low Structure programs, a very similar pattern of child interactions emerged. In all three of them, about one-third of the observed interactions were directed toward self, while in the Short programs nearly one-half were. Negative activities, whether inner or outer directed were twice as frequent in the Short programs than they were in any of the other types of programs. However, independence in activities was evidenced a slightly higher percentage of time in the Short than in the other programs.

Table 12 depicts the interactions of children attending summer programs by program type and according to the categories previously designated.

Table 12

Child Interaction Type and Level: Percentage of Time

	Program Types			
Types of Activity	High Structure	Medium Structure	Low Structure	Short Program
Inner directed:				
Positive	9	10	12	1
Negative	22	19	21	42
Outer directed:				
Positive responses	44	41	44	17
Negative responses	1	5	2	8
Independent initiation	24	25	21	32

Staff interactions were categorized as follows:

1. setting-oriented activities consisting of basic care of the children, communicating with other adults, preparation of materials, reports or food;

2. outer-directed general activities consisting of working directly with the children in tasks such as supervision, organization, play, conversing, listening, responding, but not including formal teaching;

3. outer-directed formal instructional tasks;
4. outer-directed positive and negative reinforcement.

Programs can be differentiated by the time staff spent in various types of interaction activities. High Structure programs staff spent three-quarters of the time they were being observed in direct instructional interaction along with positive reinforcement. Staff in the other three program types spent only about one-third of their time in these and about one-half in general outer-directed activities. Setting-oriented activities took about one-fifth of the time in all programs, while negative reinforcement was almost nil.

Table 13 depicts the information regarding staff interactions during observations by program types and according to the categories designated.

Table 13

Staff Interaction Type and Level: Percentage of Time

	Program Type			
Type of Activity	High Structure	Medium Structure	Low Structure	Short Program
Setting oriented:				
Preparation tasks	10	12	10	8
Basic care	1	9	4	6
Outer directed:				
General activities	12	43	58	47
Direct instruction	45	24	23	37
Reinforcement:				
Positive	31	12	5	2
Negative	1	0	0	0

Staff outer-directed interactions were further categorized by the methods utilized. These consisted of the following:

1) verbal or nonverbal communication without physical assistance;

2) verbal or non-verbal communication with physical assistance;

3) physical assistance or manipulation without verbal or nonverbal communication.

In all programs staff provided a minimum of manipulation or physical assistance while communicating with the children in a verbal or nonverbal manner. However, verbal or nonverbal communication with no physical assistance was the method utilized in almost one-half of the outer-directed interactions observed in the High Structure programs and slightly under one-half in the Short programs. In the Medium Structure programs, this was the case about three-quarters of the time, while in the Low Structure programs, it was somewhat under the proportion of Medium Structure programs. Therefore, verbal or nonverbal communication, without any physical assistance was the method most frequently employed.

Table 14 displays the percentages of time that staff utilized the various methods when interacting with children.

Table 14

Staff Interaction Methods: Percentage of Time

	Program Type			
Methods Employed	High Structure	Medium Structure	Low Structure	Short Program
Verbal or nonverbal:				
no physical assist	50	70	67	43
with physical assist	47	24	32	46
Physical assist only (no verbal/nonverbal)	3	6	1	11

Social Validation of Programs

In order to allow those directly involved with programs to express their perceptions of various aspects of program implementation, questionnaires were devised and distributed to summer program staff and through them to parents. These were to be answered anonymously. Staff were encouraged to respond even if they or the children with whom they worked were only indirectly involved with severely handicapped children in the summer program. Where possible, parents whose children were not attending summer programs were requested to respond to the questionnaires.

Program aspects which questionnaire items addressed were the following:

1. need for summer programs for severely handicapped children;
2. program goals;
3. program planning, organization and implementation;
4. program impact on severely handicapped children;
5. parent involvement and satisfaction;
6. staff competence and satisfaction.

Construction of questionnaires in a parallel fashion for parents and staff was designed to facilitate comparisons between the two groups. Respondents had the opportunity to reply on a scale from strongly disagree to strongly agree. However, for purposes of analysis the categories were collapsed into three: disagree, neutral and agree. Because of the comments often added when individuals did not respond to a particular question, it was deemed suitable to include failure to respond according to one of the categories in the neutral category. In addition, parents whose children were not in any program indicated that they could only respond to particular items and so left the others unanswered. As they responded to very few items, only these responses are included in the count.

Questionnaire responses in number and content revealed a keen interest by both groups in the continuation and success of summer programs for the severely handicapped. A total of 354 questionnaires were returned. Many comments and suggestions were made to the open-ended items of the questionnaire by both parents and staff.

Responses came from 189 parents whose children attended programs in 31 different program sites, as well as four parents whose children did not attend programs. This would indicate that nearly half of the parents responded. However, calculating a response rate would not be meaningful because almost half of the severely handicapped children live in other than single family homes. In some cases, more than one child lives in one foster home; in others, many children live in group homes. Residential staff had been encouraged to respond for parents since they were sometimes the only adults who saw the child in after-program hours. Since some items were child specific, one "parent" may have responded for more than one child.

A total of 161 summer staff from 35 program sites responded. This represents more than three-quarters of the staff in summer programs. However, it was not always easy for staff to determine if they were sufficiently involved with severely handicapped in the summer programs to respond to the questionnaires. Therefore, reporting response rate would not be meaningful for staff either.

Table 15 displays the number of questionnaire respondents and the number of programs centres represented by the responses by program types.

Table 15

Questionnaire Responses by Sites and Groups

Program Types	Numbers of Program Sites	Numbers of Respondents
High Structure		
Parents	2	36
Staff	2	16
Medium Structure		
Parents	9	66
Staff	9	69
Low Structure		
Parents	12	37
Staff	17	51
Short Programs		
Parents	8	50
Staff	7	25
No Program Parents		4
Total Responses		
Parents	31	193
Staff	35	161

Some questionnaire items attracted large numbers of neutral or nil responses because of the inapplicability of some of the questions to all types of programs in view of the great diversity operating in Alberta. For example, in programs that were completely integrated, the item that stated that there should be more integration was answered with a "neutral" response and a comment that the program was already integrated. The same type of comment came from skill and behavior goal oriented programs to the question which asked them to agree or disagree with need for more emphasis on skills and behaviors.

It is important to note that small numbers of respondents in some of the groups tended to unduly influence the percentages for that group. Such was the case, to some extent, for staff from High Structure Programs.

Need for Summer Programs

Need for summer programs was addressed in four of the questions. On all four items, a large number of both parents and staff showed support for summer programs. Frequently, the responses in this set of questions were in the strongly agree or strongly disagree categories.

Necessity for summer programs was the first item presented. An overwhelming majority of parents and staff from all programs, as well as three of the four parents whose children were not in a program, strongly believed that summer programs are necessary. A small percentage of both parents and staff from nearly all programs answered this negatively worded item in the affirmative. There were very few neutral responses to this item.

Table 16 displays the percentages of parent and staff responses to this questionnaire item according to program types.

Table 16

Need for Summer Programs

Summer programs for handicapped children are unnecessary.

		Percentage of Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure				
Parents	36	92	3	5
Staff	16	88	0	12
Medium Structure				
Parents	66	91	1	8
Staff	69	91	2	7
Low Structure				
Parents	37	84	0	16
Staff	51	92	2	6
Short Programs				
Parents	50	100	0	0
Staff	25	96	0	4
No Program Parents	4	75	0	25
All Programs				
Parents	189	92	1	7
Staff	161	92	1	7

Participation in future programs for their children was favored by a large proportion of parents, including three of the four parents whose children were not in a program in the summer of 1983. There was very little differentiation among parents whose children attended different types of programs. Few parents indicated disagreement about future attendance for their children and few took a neutral stance on this item.

Percentages of responses to this statement by parents in the various types of programs is given in Table 17.

Table 17

Future Program Participation

Parent: I want my child in a summer program in the future.

		Percentage of Parent Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure	36	3	8	89
Medium Structure	66	2	0	98
Low Structure	37	5	0	95
Short Program	50	0	4	96
No Program	3	0	0	100
All Programs	189	2	3	95

No participation in summer programs and staying home which item 13 suggested would have been as beneficial for the children as attendance at programs brought strong disagreement from most parents and staff. The only agreement came from parents, although only a few of them agreed. There were few neutral responses and most of those came from parents also. Staff disagreed almost totally that these children would profit as much by staying home for the summer.

Table 18 shows percentages of responses to this item by parents and staff.

Table 18

Benefits of No Summer Program

Parent: My child would have benefited as much by staying home.
Staff: These children would have benefited as much by staying home.

Program Types	N	Disagree	Neutral	Agree
		Percentage of Responses		
High Structure				
Parents	36	89	8	3
Staff	16	100	0	0
Medium Structure				
Parents	66	95	3	2
Staff	69	99	1	0
Low Structure				
Parents	37	92	3	5
Staff	51	96	4	0
Short Programs				
Parents	50	78	16	6
Staff	25	100	0	0
All Programs				
Parents	189	89	7	4
Staff	161	98	2	0

Recommendation of programs for other handicapped children received the endorsement of large numbers of parents and staff. However, more staff strongly agreed than simply agreed with this statement while the reverse was true for parents. There were very few neutral responses to this item by either group.

Percentages of responses of both parents and staff to this statement are given in Table 19.

Table 19

Recommendation of Programs for Other Handicapped Children

I would recommend this program for other handicapped children.

		Percentage of Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure				
Parents	36	0	3	97
Staff	16	0	6	94
Medium Structure				
Parents	66	0	1	99
Staff	69	4	0	96
Low Structure				
Parents	37	3	8	89
Staff	51	2	0	98
Short Program				
Parents	50	2	2	96
Staff	25	0	0	100
All Programs				
Parents	189	1	3	96
Staff	161	2	1	97

Responses to the need for summer programs for severely handicapped children can best be summarized by parent responses to the open-ended items. These brought many positive comments regarding programs from both parents and staff. One staff member commented that, "Programs such as this are very essential for handicapped children, as well as normal children." After the comment that, "A summer program which gives a good variety of recreational experiences is certainly worthwhile and necessary", one parent added, "The worth of a summer program to an individual shouldn't be measured by specific progress only. It is a very worthwhile program for my child." One parent expressed fears that programs might be eliminated. One comment summarizes the expressed (by 5 parents and 4 staff) and perhaps, unexpressed feelings of parents, "They provide parental relief, sometimes making the difference between parents being able to cope or having the child institutionalized. There are no other support services provided".

Goals of Summer Programs

In view of the differing emphases in various programs in operation in the province, two items attempted to elicit opinions of parents and staff regarding goals of programs. As could be expected, these questions drew diverse responses.

Increased skill and behavior emphasis in the programs was the first aspect questioned. High Structure programs were directly skill and behavior goal oriented. Therefore, more than one-third of the High Structure program parents and staff took a neutral stance to the statement of increasing the skill and behavior orientation. Perhaps this was the case because no increase would be possible. However, of the other half of parent respondents, more than twice as many agreed as disagreed with increased skill and behavior emphasis. This may have been agreement, not with increasing this emphasis but rather, with the amount of skill and behavior emphasis in the programs attended by their children. In the Medium Structure programs a similar parent profile emerged on the neutral scale but with an evenly divided agreed-disagreed remaining portion of the parent group. In the Low Structure and Short Program groups, almost half of the parents responded in the affirmative, with only about one-quarter disagreeing with increased skill and behavior emphasis.

The staff profile differed somewhat from that of the parents on this question. In the Low Structure programs about one-half of the staff were in favor of increased skill and behavior emphasis while in Medium and Short program groups, a similar proportion disagreed with increasing the stress on skills and behaviors. No staff in the High Structure programs agreed with increasing skill and behavior emphasis while two-thirds disagreed.

When all parents and all staff are combined and compared, about one-third of respondents in both groups took a neutral stance. However, the same proportion of parents agreed and staff disagreed (40%) with increasing emphasis on skills and behavior for summer programs. There were very few responses in any of the groups in the strongly agree or disagree categories.

Table 20 presents percentages of responses to the item which required a disagree, neutral or agree response.

Table 20

Skill and Behavior Emphasis

There should be more emphasis on skills and behavior.

		Percentage of Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure				
Parents	36	16	42	42
Staff	16	62	38	0
Medium Structure				
Parents	66	30	40	30
Staff	69	43	28	29
Low Structure				
Parents	37	30	27	43
Staff	51	24	29	47
Short Programs				
Parents	50	20	30	50
Staff	25	44	44	12
All Programs				
Parents	189	25	35	40
Staff	162	39	32	29

Increased integration with non-handicapped was the area of interest in one of the items of the questionnaire. In all groups, except the High Structure program staff (of which one-half chose to remain neutral), from one-half to three-quarters of parents and staff agreed to increased integration. This was strong agreement in one-third of the cases of agreement for parents from all program types. The highest proportion who disagreed with increased integration with non-handicapped were staff in the High Structure programs while the group having the lowest proportion of disagreement were parents of the same programs.

Table 21 gives the percentage responses to this item by program types.

Table 21

Integration with Non-handicapped

There should be more integration with non-handicapped.

Program Types	N	Percentage of Responses		
		Disagree	Neutral	Agree
High Structure				
Parents	36	3	36	61
Staff	16	25	50	25
Medium Structure				
Parents	66	21	32	47
Staff	69	15	30	55
Low Structure				
Parents	37	14	16	70
Staff	51	16	10	74
Short Programs				
Parents	50	12	10	78
Staff	25	8	40	52
All Programs				
Parents	189	14	24	62
Staff	162	15	27	58

Program Planning

Planning of programs was another facet on which opinions of parents and staff were sought. Somewhat different angles were pursued for each of the two categories of respondents. However, both dealt with planning.

When parents were faced with the statement that program information was not given to them early enough, one-half to three-quarters of the parents from the various program groups disagreed. In all but the Medium Structure Program group, nearly one-fifth of the parents agreed with the item. More than one-third of the High Structure program parents chose neutrality.

When staff were presented with an item that indicated that program planning was not carried out early enough, one-quarter of those in the High and Medium Structure programs chose to remain neutral. In the Short Program an overwhelming majority disagreed with the statement, while in Medium and Low Structure groups, about two-thirds did so. Although in the High Structure group, more than one-third disagreed, the same number agreed with the assertion. For this group, the figures represent small numbers of respondents.

Table 22 displays this information in percentage of responses for both parents and staff.

Table 22

Program Planning

Parent: I did not have information on the program early enough.
Staff: Program planning was not carried out early enough.

		Percentage of Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure				
Parents	36	44	42	14
Staff	16	38	31	31
Medium Structure				
Parents	66	82	10	8
Staff	69	61	23	16
Low Structure				
Parents	37	65	19	16
Staff	51	61	12	27
Short Programs				
Parents	50	64	18	18
Staff	25	92	8	0
All Programs				
Parents	189	67	20	13
Staff	161	63	18	19

Various problem areas related to program planning were mentioned by staff in response to the open-ended items. These items gave respondents the opportunity to state what was most and least liked in programs, as well as any problems they experienced in relation to programs. The problems mentioned most frequently in the area of program planning were the lack of staff and of children in summer programs. Responses are summarized in Chart 1 according to the number of times each was listed. Complete responses to open-ended items are listed in Appendix D.

Chart 1

Program Planning: Staff Comments

Comments	Numbers of Comments by Program Types			
	High Structure	Medium Structure	Low Structure	Short Programs
Objectives not clear	0	0	1	0
Goals differed for group home & program	1	0	2	0
Lack written resources & games adapted to handicapped	0	0	2	0
Short staffed	0	8	6	7
Too few children	0	1	4	0

Program Implementation

Program implementation was considered in several of the items. In addition, four open-ended questions gave ample opportunity for respondents to further clarify their responses or to express any areas of particular concern to them.

Length of programs was considered an important element since programs in Alberta vary in duration. Therefore, one item to which agreement or disagreement was sought indicated that the programs just terminated were too short. Nearly all of the parents from Medium Structure programs agreed with this statement, while about half of those from Short programs did. However, one-half of the parents from High Structure and nearly one-half from Low Structure programs disagreed. No parents from the Medium Structure group chose neutrality on this item, although about one-quarter of parents from the other groups did so.

Staff responses on this item were less unanimous than were those of parents. Only in the Medium Structure group was there a larger proportion in one of the categories: nearly three-quarters of the staff disagreed with the statement. In High and Low Structure groups, responses were split, with about one-third choosing each category, including neutral. In Short Programs more than one-half of the staff chose neutrality. Table 23 gives percentages of responses for all groups.

Table 23

Length of Programs

This summer's program was too short.

		Percentage of Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure				
Parents	36	50	28	22
Staff	16	38	31	31
Medium Structure				
Parents	66	2	0	98
Staff	69	65	22	13
Low Structure				
Parents	37	46	22	32
Staff	51	28	39	33
Short Programs				
Parents	50	22	24	54
Staff	25	16	60	24
All Programs				
Parents	189	25	16	59
Staff	161	43	34	23

Satisfaction and dissatisfaction with program length was mentioned several times in the open-ended questions. Generally, programs were considered too short or just right in length. Chart 2 displays comments on program length.

Chart 2

Program Length: Parent and Staff Comments

	Numbers of Comments by Program Types			
Types of Comments	High Structure	Medium Structure	Low Structure	Short Programs
Program length just right				
Parents	5	0	0	1
Staff	0	0	0	1
Program too short				
Parents	3	1	3	6
Staff	1	2	11	4
Program too long				
Staff	0	1	0	0
Too early in the day				
Parents	1	0	0	0
Day too short				
Parents	0	0	0	2
Day too long for little ones				
Staff	0	1	0	0

Program organization was queried. More than three-quarters of all parents and staff indicated that they believed that summer programs were well organized. However, for staff groups the range of agreement was somewhat higher than it was for parents. Generally more parents remained neutral. There was a small percentage of disagreement from parents and staff in all but High Structure groups. Disagreement with the assertion that programs were well organized was highest in Medium and Low Structure programs. Table 24 presents data in percentages of disagreement, neutrality and agreement to this item of the questionnaire.

Table 24

Program Organization

This summer's program was well organized.

		Percentage of Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure				
Parents	36	5	14	81
Staff	16	0	12	88
Medium Structure				
Parents	66	6	9	85
Staff	69	13	4	83
Low Structure				
Parents	37	5	11	84
Staff	51	10	10	80
Short Programs				
Parents	50	8	16	76
Staff	25	4	4	92
All Programs				
Parents	189	6	12	82
Staff	161	9	7	84

Program organization was also commented upon by parents and staff in open-ended items. Various aspects of organization are summarized in Chart 3 which gives numbers of comments by parents and staff.

Chart 3

Program Organization: Parent and Staff Comments

Types of Comments	High Structure	Medium Structure	Low Structure	Short Programs
	Numbers of Comments by Program Types			
Well organized & diverse				
Parents	1	2	0	0
Staff	0	2	1	1
Not well organized/ organization disliked				
Parents	1	0	0	1
Staff	1	6	1	0

Time organization in terms of time spent in ancillary tasks which could reduce time directly with children was questioned. From one-fifth two-fifths of parents in all programs opted for a neutral position. One-quarter of High Structure staff decided to remain neutral, while a smaller proportion in the other programs did so. Twice as many parents whose children attended High Structure programs disagreed with this statement when compared with staff from the same type of programs, one-half of whom disagreed.

Agreement with the statement that too much time was spent on organizational and paper tasks was nil for High and Short Structure parents and Medium Structure staff and minimal for other groups, except the High Structure program where one-quarter of the staff agreed. However, it must be noted that a small number of responses for High Structure unduly influences the percentage for this category, since the number of staff in all was small. Information on parent and staff perceptions on how time was spent is shown in Table 25.

Table 25

Time Organization

Too much time was spent on organizational and paper tasks.

Program Types	N	Percentage of Responses Disagree	Neutral	Agree
High Structure				
Parents	36	81	19	0
Staff	16	50	25	25
Medium Structure				
Parents	66	65	32	3
Staff	69	86	14	0
Low Structure				
Parents	37	60	35	5
Staff	51	80	12	8
Short Programs				
Parents	50	60	40	0
Staff	25	84	12	4
All Programs				
Parents	189	66	32	2
Staff	161	80	14	6

Various aspects of program implementation were also mentioned several times by parents and staff in response to open-ended items. Chart 4 summarizes favorable and unfavorable comments of parents and staff according to program type for several areas of program implementation.

Chart 4

Program Implementation: Parent and Staff Comments

Types of Comments	High Structure	Medium Structure	Low Structure	Short Programs
	Numbers of Comments by Program Types			
Good atmosphere/program				
Parents	3	6	2	2
Staff	0	7	4	3
Liked low ratio & time for individualized work				
Parents	3	0	0	1
Staff	3	4	2	5
Insufficient time for individualized work				
Parents	0	1	0	0
Staff	2	2	1	0
Too diverse age/ability				
Staff	0	2	3	1
Disliked overtime				
Staff	4	3	0	0
Liked intensity of programming				
Parents	1	0	0	0
Staff	1	0	0	0
Methods too restrictive				
Staff	1	0	0	0
Lack of proper physical care				
Parents	0	3	4	0
Children appear over-medicated				
Staff	1	0	0	0

Appropriateness and adequacy of facilities provided was another aspect of program implementation which was referred to by parents and staff. One parent commented that the program should not have been held in the school for the handicapped.

One staff member felt that " special needs children could learn more in the natural environment than in the classroom". Others mentioned lack of space for the numbers of children, as well as lack of convenience for items such as having only a pay phone to use in case of emergencies. Chart 5 indicates numbers of parent and staff comments according to these two broad categories.

Chart 5

Suitability of Program Facility

Numbers of Comments by Parents and Staff

	Program Types			
	High Structure	Medium Structure	Low Structure	Short Programs
Inappropriate facility				
Parents	0	0	1	0
Staff	0	1	0	0
Inadequate facility				
Staff	8	0	2	2

Transportation was a problem that surfaced in conversations and was mentioned several times in the parent and staff comments. In rural areas, children were not always able to come the long distances. In cities, programs were at times located far from children's homes. This necessitated early rising and long bus rides, a hardship for both parents and children. One parent was happy that the program was nearby, thus facilitating attendance. Chart 6 gives the numbers of responses by program type.

Chart 6

Transportation: Parent and Staff Comments

	Numbers of Comments by Program Types			
	High Structure	Medium Structure	Low Structure	Short Programs
Insufficient				
Parents	4	0	2	1
Staff	0	8	12	1
Long bus ride				
Parents	3	0	1	1
Staff	0	0	1	0

Funding was another area that presented problems, either because it was felt there was too little or the timing of funding information and/or approval came late. Lack of adequate funding was blamed for some children not being able to attend, as well as limiting opportunities for broader experiences and more adequate programming, particularly for rural children. Had funding been made available sooner, earlier hiring and better training of staff, as well as better program preparation would have been possible. Chart 7 summarizes comments in relation to funding.

Chart 7

Funding: Parent and Staff Comments

	Numbers of Comments by Program Types			
	High Structure	Medium Structure	Low Structure	Short Programs
Too little				
Parents	0	0	2	1
Staff	0	7	9	2
Too late				
Parents	0	0	3	0
Staff	1	1	3	0
Fees a problem				
Parents	0	1	3	1

The final questions asked of staff was: "Were the objectives of your summer program realized?" A majority responded in the affirmative. As opportunity was provided for explanations, positive comments in relation to programs were added. Chart 8 gives the numbers of staff and the way they responded by program type.

Chart 8

Objectives Achieved: Numbers of Staff Comments

Program Types	Yes	Mostly/Some	No Response
High Structure	11	0	5
Medium Structure	51	5	13
Low Structure	46	3	2
Short Programs	21	1	3
All Programs	129	9	23

Staffing of Summer Programs

Success of programs was dependent, to a great extent, on the quality of staff. Most programs hired university and high school students almost exclusively. Were they well prepared for this difficult task? Were they competent in programming for severely handicapped children? Were parents involved? Was there adequate help available for staff and parents when problems arose? These were areas in which parent and staff opinions were sought.

Staff preparation prior to summer programs was an aspect of staff qualifications that was brought to the staff for their opinion. The largest proportion of staff who disagreed with the questionnaire's claim of inadequate staff preparation came from Short programs, followed closely by Medium Structure programs. Staff from High Structure programs had a larger percentage of agreement than disagreement, although one-quarter chose to take a neutral position. Table 26 gives percentage responses to this question by program types.

Table 26

Staff Preparation

Staff: Staff preparation prior to the program was inadequate.

		Percentage of Staff Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure	16	44	25	31
Medium Structure	69	83	6	11
Low Structure	51	66	12	22
Short Programs	25	88	8	4
All Programs	161	74	10	16

The adequacy of staff preparation was cited as a problem by parents and staff. The need to get to know the individual children with whom they were to work, as well as additional training on how to deal with handicapped children and recreation particularly suited to the handicapped were suggested by respondents. One staff member made reference to the excellent preparation which was made available for summer staff because they were allowed to go into the schools and teachers helped them get to know the handicapped children with whom they would be working. One staff member stated that there was a need to "stress leadership by people with experience and education in this field". Several times, there was mention of lateness of information that funding would be available. This hindered early hiring and adequate preparation of staff. Chart 9 summarizes comments in this area.

Chart 9

Staff Preparation: Parent and Staff Comments

Types of Comments	Numbers of Comments by Program Types			
	High Structure	Medium Structure	Low Structure	Short Programs
Satisfactory				
Staff	0	2	0	1
Insufficient				
Parents	4	1	1	0
Staff	1	5	6	0

Staff competence was an area in which parent opinions were sought. Although one-quarter of High Structure staff thought their preparation was inadequate, more than four-fifths of the parents believed the staff were competent. In Medium Structure programs, more than four-fifths of the parents also agreed that staff were competent, while this agreement, although lower, still remained high (about two-thirds) in Low Structure and Short programs. In the latter two programs, about one-third of the parents chose neutrality. There was almost no disagreement with this statement. Table 27 indicates parents' opinions on this question.

Table 27

Staff Competence

Parent: The staff were competent in programming for handicapped.

		Percentage of Parent Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure	36	0	14	86
Medium Structure	66	2	12	86
Low Structure	37	5	27	69
Short Programs	50	2	32	66
All Programs	189	2	21	77

Parents were most laudatory of staff competence. Some examples of the comments made to describe staff are: "competent", "super", "patient", "dedicated", "understanding", "concerned about child", "genuinely interested", ability to work with each child". Problems in parent-staff communication appeared to be infrequent. In only a few cases were there references to problems between staff members. Chart 10 summarizes the numbers of comments regarding opinions on staff competence.

Chart 10

Staff Competence: Parent and Staff Comments

Types of Comments	High Structure	Medium Structure	Low Structure	Short Programs
	Numbers of Comments by Program Types			
Capable staff				
Parents	12	10	9	10
Staff	0	2	0	1
Staff problems				
Parents	0	0	1	0
Staff	1	2	5	1
Good communication				
Parents	1	3	0	1
Staff	2	0	0	1
Communication problems				
Parents	2	1	2	4
Staff	0	1	4	0

Parent involvement in summer programs was explored with one statement addressed to staff. In High Structure programs one-quarter agreed that there was too little involvement with parents/group homes while in Medium Structure the proportion rose to one-third and in Low Structure programs, it rose above one-third. Only in the Short programs was there a high proportion (82%) who disagreed with this statement. Disagreement in Low Structure programs was nearly one-half of the respondents, while in High and Medium Structure programs, slightly more than one-third disagreed. In addition, about one-third of the High and Medium Structure groups remained neutral. Table 28 displays the data for staff responses.

Table 28

Parent Involvement

Staff: There was too little involvement with parents/group homes.

		Percentage of Staff Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure	19	19	44	37
Medium Structure	69	36	30	40
Low Structure	51	47	14	39
Short Programs	25	76	8	16
All Programs	161	44	23	33

Involvement by the community: the town, parents, or other volunteers was spoken of, especially by staff. In one instance, lack of interest by the town almost prevented a summer program from taking place. In other instances, lack of parent participation and support created problems. Chart 11 gives the numbers of times comments were made relating to outside involvement in summer programs.

Chart 11

Parent & Community Involvement: Parent & Staff Comments

Types of Comments	High Structure	Medium Structure	Low Structure	Short Programs
	Numbers of Comments by Program Types			
Lack of parent interest and participation				
Parents	0	1	1	0
Staff	0	7	1	0
Lack of town involvement				
Parents	0	0	1	0
Staff	0	2	2	0

Professional help was available when needed according to more than three-quarters of all respondents from all program types. The highest percentage who disagreed when the item suggested that help was not available came from High Structure program parents and staff. Medium Structure parents had the lowest proportion of disagreement (79%) and the highest proportion of agreement (17%) on this question. Table 29 gives percentage of responses as well as the slightly different statements for each category of respondents.

Table 29

Availability of Professional Help

Parent: When I had questions or problems, the staff were not helpful.
Staff: When problems or questions arose, there was no one to help.

		Percentage of Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure				
Parents	36	94	6	0
Staff	16	88	12	0
Medium Structure				
Parents	66	79	4	17
Staff	69	86	13	1
Low Structure				
Parents	37	87	10	3
Staff	51	86	2	12
Short Programs				
Parents	50	86	14	0
Staff	25	84	12	4
All Programs				
Parents	189	85	9	6
Staff	161	86	9	5

Staff satisfaction could be gauged by whether they wanted to work in future summer programs after the present experience. Over three-quarters of all staff indicated that they would like to do so. Very few disagreed with the positively worded item: none in Short programs, 2% in Low Structure, 7% in Medium Structure and 12% in High Structure programs. Table 30 presents the data from this staff questionnaire item.

Table 30

Staff Satisfaction

Staff: I would like to work in a summer program in the future.

		Percentage of Staff Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure	16	6	0	94
Medium Structure	69	7	16	77
Low Structure	51	2	10	88
Short Programs	25	0	8	92
All Programs	161	4	11	85

Staff satisfaction emerged in the numerous comments made by staff about programs and programming. In general, staff were happy with their experience and with the general thrust of programming, whether they worked in educational or recreational programs. The only substantial complaint they had was the insufficient training as cited earlier. And this they attributed mainly to the timing of funding availability. Chart 12 gives staff likes and dislikes by types of programs. Other aspects which staff disliked are given elsewhere according to the topic to which they referred.

Chart 12

Staff Satisfaction: Staff Comments

Types of Comments	Numbers of Comments by Program Types			
	High Structure	Medium Structure	Low Structure	Short Programs
Aspects liked:				
Work with children	3	7	5	5
Freedom in programming	2	2	1	0
Programming approach	5	1	0	0
Own learning experience	3	5	3	0
Aspects disliked				
Low wages	0	0	1	0

Impact on Severely Handicapped Children

Assessing the impact of summer programs on severely handicapped children, especially on their basic skills and inappropriate behaviors as a result of summer programming, was a major purpose of this study. Therefore, parents and staff were asked to consider three statements on this topic.

Impact on inappropriate behaviors was the first area addressed. A large proportion of both parents and staff chose to remain neutral when it was stated that children had improved in behaviors. Generally, more parents than staff chose neutrality. The exception was the staff in Short programs with almost all of the staff (95%) not expressing an opinion either for or against the statement. About one-half of all respondents chose to express their opinion and of those, most agreed that there had been improvement. The slightly different wording for parents and staff, as well as the percentage of their responses to this item is displayed in Table 31.

Table 31

Impact on Inappropriate Behaviors

Parent: My child's behavior has improved during the summer.
Staff: The children's behavior has improved during the summer.

		Percentages of Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure				
Parents	36	8	45	47
Staff	16	0	16	94
Medium Structure				
Parents	66	6	42	52
Staff	69	3	42	55
Low Structure				
Parents	37	5	60	35
Staff	51	6	27	67
Short Programs				
Parents	50	8	60	32
Staff	25	0	92	8
All Programs				
Parents	189	7	51	42
Staff	161	3	42	55

Impact on skills was also questioned. For the statement indicating that skills had improved, over one-half of all respondents agreed. However, about one-third of all parents and all staff, except High Structure, took a neutral stance on this item. Some parents indicated that it was too soon to be able to make this judgment. Almost no one disagreed. Table 32 details this information on skill improvement during the summer.

Table 32

Inpact on Skills

Parent: My child's skills have improved during the summer.
Staff: The children's skills have improved during the summer.

		Percentage of Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure				
Parents	36	3	31	67
Staff	16	6	6	88
Medium Structure				
Parents	66	3	41	56
Staff	69	2	30	68
Low Structure				
Parents	37	5	41	54
Staff	51	8	33	59
Short Programs				
Parents	50	12	46	42
Staff	25	4	76	20
All Programs				
Parents	189	6	40	54
Staff	161	4	36	60

Many comments from parents and staff to the open-ended statements referred to impact of programs on their severely handicapped children. These comments often summarized and further explained their responses to the structured items. Skills and behaviors were frequently mentioned aspects of programming. Insufficient emphasis on skills and behaviors was noted most frequently in Short followed by Low Structure programs. However, improvement was commented on most frequently by High structure parents and Medium Structure staff.

Chart 13 summarizes parent and staff comments regarding the skill and behavior orientation and results of program.

Chart 13

Skill & Behavior Program Aspects: Parent & Staff Comments

	Numbers of Comments by Program Types			
Types of Comments	High Structure	Medium Structure	Low Structure	Short Programs
Liked behavior focus				
Parents	4	0	0	0
Skills were maintained				
Parents	4	0	0	0
Staff	0	7	0	0
Skills & behaviors improved				
Parents	8	3	0	2
Staff	0	0	1	5
Insufficient emphasis				
Parents	1	1	1	8
Staff	0	0	2	2
School programs continued				
Parents	1	1	1	0
Staff	0	1	0	0

Goals and impact of programs, other than those specifically mentioned by the questionnaire items were added by parents and staff in response to open-ended items. Recreation was an important aspect of many summer programs and was frequently mentioned in a positive light. Among the comments were learning in a fun atmosphere, the interest and enjoyment evidenced by the children as well as the value of doing new things and going new places. Others noted that recreation should be added to the skill and behavior emphasis. Chart 14 summarizes the references to the recreation aspect of programs.

Chart 14

Recreation Aspects: Parent and Staff Comments

Types of Comments	Numbers of Comments by Program Types			
	High Structure	Medium Structure	Low Structure	Short Programs
Liked recreation emphasis				
Staff	0	4	7	8
Was stimulating & enjoyable				
Parents	4	1	5	7
Staff	0	20	7	2
Was both fun & learning				
Parents	0	1	0	0
Staff	0	12	7	2
Liked variety of activities				
Parents	0	24	11	20
Staff	0	18	16	9
Were lack of activities				
Parents	1	1	4	0
Staff	0	0	1	0
Were excess of activities				
Parents	0	1	3	1
Staff	0	2	5	2

In the open-ended items the positive effects of integration with non-handicapped children and community exposure was listed by many respondents. In addition, there was mention that integrated programs were too demanding of handicapped children and that as result, the handicapped children's skills were not developed. One parent response indicated that the child should be with higher functioning children and another mentioned the need of good models for the handicapped. One staff member revealed that some parents did not send their lesser handicapped children because of the presence of severely handicapped in the programs as if there was a stigma attached to the programs. In other instances, although a program for non-handicapped children operated in the same facility, staff with the handicapped felt that their program and children were not well accepted by the other program staff. However, negative comments regarding integration were few compared to the positive feelings. Chart 15 displays numbers of parent and staff responses which mentioned the integration aspect of summer programs.

Chart 15

Integration: Parent and Staff Comments

	Numbers of Comments by Program Types			
Types of Comments	High Structure	Medium Structure	Low Structure	Short Programs
Positive effects of integration with non-handicapped children				
Parents	0	3	5	2
Staff	0	8	17	0
Positive effects of integration in community				
Parents	0	1	2	3
Staff	0	5	1	0
Insufficient integration				
Parents	0	1	0	0
Integrated programs too demanding for handicapped				
Staff	0	5	0	0
Handicapped children & programs not accepted				
Staff	0	0	6	0

Socialization and contact with other children were mentioned. Feelings of accomplishment, self-awareness, sense of belonging were also suggested as benefits of programs. Chart 16 gives numbers of parents and staff from each program type who mentioned these aspects as benefits of summer programs.

Chart 16

Socialization: Parent and Staff Comments

Types of Comments	Numbers of Comments by Program Types			
	High Structure	Medium Structure	Low Structure	Short Programs
Socialization for child				
Parents	0	3	4	0
Staff	0	3	3	1
Child busy and involved				
Parents	0	3	3	2
Attention given to child				
Parents	2	2	1	1
Developed child's self-awareness & self-confidence				
Staff	0	1	1	0

Overall improvement in the child as visible to others again brought forth a lot of neutrality. The differentiation between groups on this item may reflect the type of respondent. A number of children in some of the programs lived in group home situations and so the question was not applicable in the same fashion as for those who lived with parents. Of the remainder (about one-half of all respondents) almost all agreed and few disagreed. Table 33 gives the percentage of responses for parents from the various groups to this statement.

Table 33

Noticeable Overall Improvement

Parent: Friends and relatives have noticed my child's improvement.

		Percentage of Parent Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure	36	8	28	64
Medium Structure	66	3	47	50
Low Structure	37	8	46	46
Short Programs	50	12	50	38
All Programs	189	7	44	49

Parent and staff comments noted that there was general improvement in the children during summer programs. Chart 17 gives the numbers of these comments for both groups.

Chart 17

Improvement in Children: Parent and Staff Comments

	Numbers of Comments by Program Types			
Types of Comments	High Structure	Medium Structure	Low Structure	Short Programs
Improvement noticed				
Parents	2	6	1	0
Staff	2	3	0	0

Impact of the demands placed on the child by program orientation and length revealed that a large majority of parents and staff found that the day was not too long nor the program too demanding for the children. However, in some of the programs this majority dropped to about three-quarters on these items. Tables 34 and 35 portray responses on two items dealing with this topic. Differentiation in item wording for parents and for staff is included.

Table 34

Impact of Length of Day

Parent: For my child, the day was too long.
Staff: For a handicapped child, the day was too long.

		Percentage of Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure				
Parents	36	89	3	8
Staff	16	62	19	19
Medium Structure				
Parents	66	91	8	1
Staff	69	73	10	17
Low Structure				
Parents	37	76	13	11
Staff	51	78	4	18
Short Program				
Parents	50	86	10	4
Staff	25	84	4	12
All Programs				
Parents	189	86	9	5
Staff	161	75	8	17

Table 35

Impact of Program Requirements

Parent: For my child, the program was too demanding.
Staff: For a handicapped child, the program was too demanding.

		Percentage of Responses		
Program Types	N	Disagree	Neutral	Agree
High Structure				
Parents	36	92	5	3
Staff	16	100	0	0
Medium Structure				
Parents	66	74	17	9
Staff	69	88	10	2
Low Structure				
Parents	37	89	8	3
Staff	51	96	4	0
Short Programs				
Parents	50	84	10	6
Staff	25	96	4	0
All Programs				
Parents	189	83	11	6
Staff	161	93	6	1

The over-all impact of programming on severely handicapped children was, in the opinions of parents and staff, a beneficial one. Without summer programming, the children would suffer, not only in skills and behaviors, but would lack the stimulating effects of being with other children and adults. The community, in general, and the summer staff, in particular, would be deprived of the opportunity of working with and becoming comfortable with handicapped individuals and thus of becoming more accepting of those who are "different".

Impact Study of Effect on Children

Impact on Inappropriate Behaviors

To determine the impact of summer programming on severely handicapped children in Alberta, 201 school age dependent and multihandicapped children were selected to participate in this study. These children attended various types of programs during the summer of 1983.

Several questions asked at the onset provided direction for the study. These queries arose from the research literature and the need for Alberta Education to ascertain the value of summer programs for severely handicapped children and the wisdom of continuing to provide funding for them.

The questions for which answers were sought by this study were:

1) Do summer programs for severely handicapped children prevent regression to increased inappropriate behaviors?
2) Do summer programs for severely handicapped children produce a decrease in inappropriate behaviors?

In order to answer these questions, observations collected on the Inappropriate Behaviors Observation Checklist were analyzed by program types for each area of behavior recorded on the instrument.

Four areas of inappropriate behavior as well as the total score showed significant differences between groups on the adjusted* posttest (post-program) means averages. Three areas of inappropriate behavior, however, did not do so. This was due to the infrequency of occurrence of these behaviors in all program groups.

Inappropriate passive behaviors. Unadjusted mean average scores before and after summer programs were compared for each group. High and Medium Structure programs decreased their means, that is, fewer inappropriate passive behaviors occurred in these groups after summer programs than there had been before. However, for each of the Low Structure, Short and No Program groups, occurrences of inappropriate behaviors increased after summer programs. For these groups, regression occurred.

Table 36 displays the information on pre-program as well as unadjusted and adjusted post-program scores for inappropriate passive behaviors. For passive behaviors, Figure 1 (using unadjusted means before and after summer programs) provides a visual representation of the regression (increase in inappropriate passive behaviors) which occurred in the Low Structure, Short and No Program groups.

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*Note. The reader will recall from the discussion in the Methods section that behavior levels were not equivalent for all groups on entry to the summer programs. Accordingly, the pre-test (pre-program) levels were used to "adjust" the posttest scores to control for initial differences. The method used was analysis of covariance.

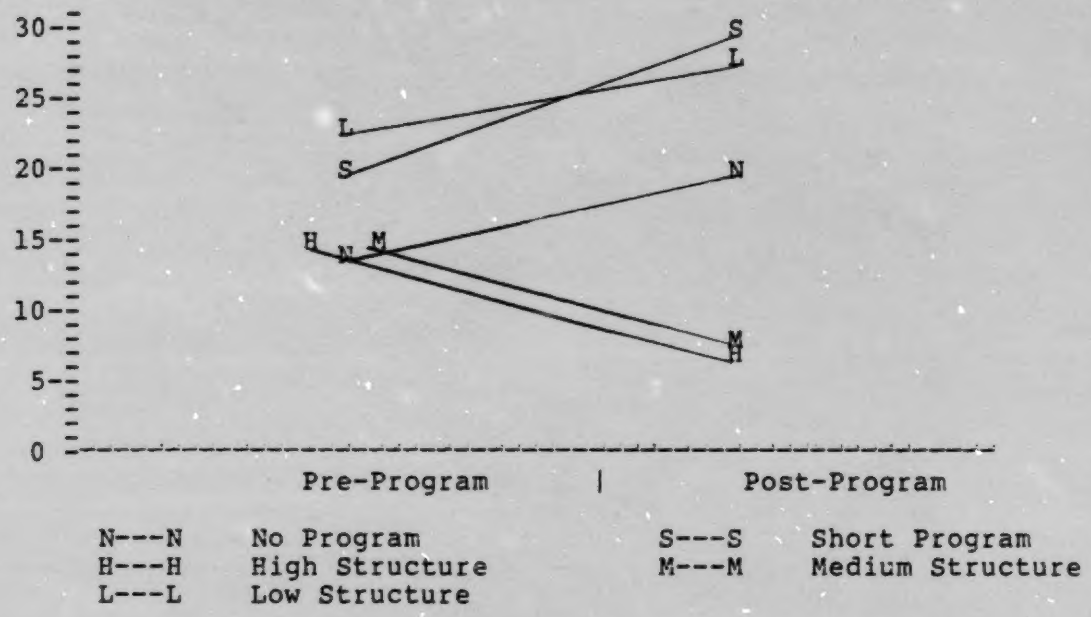
Table 36

Passive Behaviors: Pretest and Posttest Scores

Program Types	N	Inappropriate Behaviors per 15 min. Covariate Mean (Pretest)	Unadjusted Posttest Mean	Adjusted Posttest Mean
No Program	58	14.24	20.42	22.69
Short Program	45	20.24	30.20	27.17
High Structure	22	14.36	7.27	9.21
Medium Structure	37	13.65	7.95	10.53
Low Structure	39	22.77	27.92	24.49

Figure 1

Passive Behaviors: Pretest and Unadjusted Posttest Scores



When post-test means were adjusted by analysis of covariance and differences between pairs of programs compared, each of the High and Medium Structure programs was significantly better (p<.01) than any of the No Program, Short Program or Low Structure Program groups in reducing these behaviors. There were no statistically significant differences among Medium Structure, Short and No Program groups. Table 37 gives the results of the two-way analysis of covariance and the pair-wise comparison of groups. There was no significant interaction when age was considered as a factor; all programs affected older and younger children equally.

Table 37

Inappropriate Passive Behaviors:

Two-way Analysis of Covariance

Program, Age and Interaction Effects

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Probability of Significance
Covariates	23253.5	1	23253.5	88.2	0.000
Main effects	10623.4	6	1770.6	6.7	0.000
Program	8838.8	4	2209.7	8.4	0.000
Age	623.0	2	311.5	1.2	0.309
Interaction	3299.3	7	471.3	1.8	0.092
Error	49055.7	186	263.7		

Difference Between Adjusted Posttest Means

Pair-wise Comparisons

Program Types	Short Program	High Structure	Medium Structure	Low Structure
No Program	4.48	13.48**	12.16**	1.8
Short Program		17.96**	16.64**	2.68
High Structure			1.32	15.28**
Medium Structure				13.96**

* p<.05 (HSD = 5.56 Using Tukey's Multiple Comparison test)
** p<.01 (HSD = 6.62 Using Tukey's Multiple Comparison Test)

A second analysis of the impact of the various programs in reducing inappropriate passive behaviors involved predicting an expected score for each child and computing the proportion who met or exceeded (based on pretest levels) expectations with the percentage who did not. Differences between groups for differences between observed and expected scores were tested for significance utilizing chi square. About the same proportion of students from No Program (50%), Short Program (49%) and Low Structure Program (51%) had fewer than or equal to the number of inappropriate passive behaviors predicted based on their entry level scores. There were no significant differences among them.

In the Medium and High Structure groups, about the same proportion of children (86% and 87%, respectively) had fewer than or equal to the number of inappropriate passive behaviors predicted for them. There were no significant differences between High and Medium Structure groups.

When combined Medium and High Structure groups were compared to combined No Program, Short Program and Low Structure Program groups, significant differences ($p<.000$) were found. Therefore, a significantly greater proportion of students from High and Medium Structure groups reduced their inappropriate passive behaviors according to predictions than did those from any of the No Program, Short Program or Low Structure Program groups.

Goals of these two program groups, particularly High Structure, were, not only to maintain appropriate, but to decrease inappropriate behaviors. However, behavior change was not a goal of the Short and Low Structure programs and this is congruent with the findings.

Table 38 displays the percentage of students who deviated in both directions from predicted posttest scores.

Table 38

Inappropriate Passive Behaviors: Deviations from Expected Posttest Scores[1]

Program Types		N	Percentages of Children	
			$\leq$ Predicted Score	> Predicted Score
No Program	(1)	58	50.0	50.0
Short Program	(2)	45	48.9	51.1
High Structure	(3)	22	86.4	13.6
Medium Structure	(4)	37	86.5	13.5
Low Structure	(5)	39	51.3	48.7

[1] Expected posttest scores were derived by the regression of pretest scores on posttest scores.

$\chi^2 = 23.25$; df = 4; $p = .0001$

Summary of Posthoc Tests

Programs Compared	χ^2	Degrees of Freedom	Probability of Significance
1 + 2 + 5 vs. 3 + 4	21.70	1	.0000
1 vs. 2 vs. 5	0.05	2	.9764
3 vs. 4	0.0	1	1.0

Inappropriate active behaviors. When groups were compared on active behaviors, there were no significant differences between or among them. None of the programs had a significant influence on inappropriate active behaviors. The occurrence of these behaviors for all groups was relatively infrequent. The unadjusted posttest means varied from 8.49 to 14.09. Table 39 displays the two-way analysis of covariance data for this subtest. Once again, there was no differential effect according to age; that is, neither older nor younger children benefited from any program when unwanted active behaviors were considered.

Table 39

Active Behaviors: Pretest and Posttest Scores

		Inappropriate Behaviors per 15 min.		
Program Types	N	Covariate Mean (Pretest)	Unadjusted Posttest Mean	Adjusted Posttest Mean
No Program	58	8.02	8.49	10.81
Short Program	45	13.02	14.09	12.27
High Structure	22	18.18	13.82	9.08
Medium Structure	37	10.51	9.27	9.77
Low Structure	39	9.87	10.59	11.45

Inappropriate Active Behaviors:

Two-way Analysis of Covariance

Program, Age and Interaction Effects

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Probability of Significance
Covariates	14500.9	1	14500.9	158.8	0.000
Main effects	466.1	6	77.7	0.9	0.532
Program	203.4	4	50.9	0.6	0.694
Age	153.8	2	76.9	0.8	0.432
Interaction	544.8	7	77.8	0.9	0.545
Error	16981.8	186	91.3		

Inappropriate Active Behaviors

Difference Between Adjusted Posttest Means

Pair-wise Comparisons

Program Type	Short Program	High Structure	Medium Structure	Low Structure
No Program	1.46	1.73	1.04	1.8
Short Program		3.19	2.50	.82
High Structure			0.69	2.37
Medium Structure				1.68

When deviations from expected posttest scores were compared, No Program group had the highest percentage of children (74%) with fewer than or equal to the number of predicted post-program inappropriate passive behaviors. Short Program had the lowest percentage (53%); High, Medium and Low Structure Program groups each had about three-quarters of the children attaining the level of behaviors predicted for them. However, none of the differences between programs reached statistical significance. Table 40 gives the results of chi square analysis.

Table 40

Inappropriate Active Behaviors

Deviations from Expected Posttest Scores[1]

Program		N	Percentages of Children	
			$\leq$ Predicted Score	>Predicted Score
No Program	(1)	58	74.1	25.9
Short Program	(2)	45	53.3	46.7
High Structure	(3)	22	63.6	36.4
Medium Structure	(4)	37	67.6	32.4
Low Structure	(5)	39	61.5	38.5

[1] Expected posttest scores were derived by the regression of pretest scores on posttest scores.

$X^2 = 5.12$; df = 4; p = .2751

Self-abusive behaviors. A comparison of program groups on self-abusive behaviors revealed a very low level of frequency for all groups and therefore, no significant differences among them. There was also no significant interaction when age of pupil was considered. The variation in unadjusted posttest mean occurrences was from .30 to 2 for the groups. Table 41 shows the results of analysis of covariance for self-abusive behaviors by program types.

Table 41

Self-Abusive Behaviors: Pretest and Posttest Scores

		Inappropriate Behaviors per 15 min.		
Program Types	N	Covariate Mean (Pretest)	Unadjusted Posttest Mean	Adjusted Posttest Mean
No Program	58	0.09	1.03	1.22
Short Program	45	0.58	1.49	1.44
High Structure	22	0.50	2.28	2.17
Medium Structure	37	0.54	0.30	0.19
Low Structure	39	0.46	0.85	0.79

Self-Abusive Behaviors: Two-way Analysis of Covariance

Program, Age and Interaction Effects

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Probability of Significance
Covariates	564.8	1	564.8	68.5	0.000
Main effects	86.1	6	14.4	1.7	0.114
Program	64.4	4	16.1	2.0	0.103
Age	19.9	2	9.9	1.2	0.302
Interaction	67.2	7	9.6	1.2	0.325
Error	1533.9	186	8.2		

Self-Abusive Behaviors

Difference Between Adjusted Posttest Means

Pair-wise Comparisons

Program Types	Short Program	High Structure	Medium Structure	Low Structure
No Program	0.22	0.95	1.03	0.43
Short Program		0.73	1.25	0.65
High Structure			1.98	1.38
Medium Structure				0.60

More than 80% of all groups had fewer than or equal to the number of inappropriate self-abusive behaviors predicted for them. Although there were no significant differences (very low frequency of occurrence) among groups, 97% of the students in Medium Structure compared to 81% in No Program attained as few as or fewer than the number of behaviors predicted for them in this area. Table 42 gives the percentages of children attaining the number of behaviors predicted for them and percentages for those who did not for all program groups.

Table 42

Self-Abusive Behaviors

Deviations from Expected Posttest Scores[1]

Percentages of Children

Program		N	≤ Predicted Score	>Predicted Score
No Program	(1)	58	81.0	19.0
Short Program	(2)	45	86.7	13.3
High Structure	(3)	22	81.8	18.2
Medium Structure	(4)	37	97.3	2.7
Low Structure	(5)	39	92.3	7.7

[1] Expected posttest scores were derived by the regression of prestest scores on posttest scores.

$X^2 = 7$; df = 4; p = .1316

Inappropriate personal behaviors. Unadjusted posttest means compared to pretest means show that No and Short Programs as well as Low Structure groups regressed, that is, increased their inappropriate behaviors in this area. High and Medium Structure Program groups decreased their inappropriate behaviors. Table 43 gives the data on pretest and posttest means, both adjusted and unadjusted. Figure 2 depicts the actual pretest and posttest scores, showing increase and decrease of inappropriate personal behaviors for each type of program. The most marked regression (increase in unwanted behaviors) occurred in the Low Structure group followed by the No Program children.

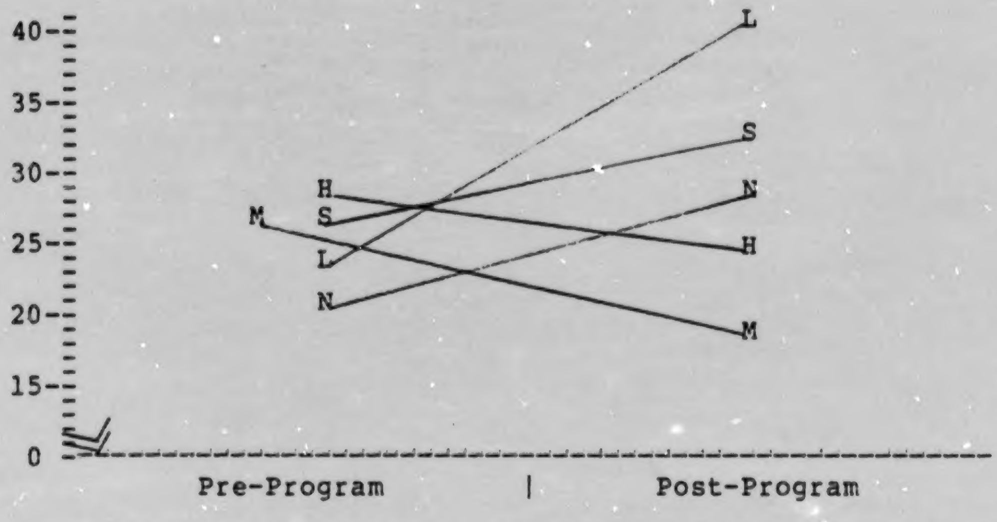
Table 43

Personal Behaviors: Pretest and Posttest Scores

		Inappropriate Behaviors per 15 min.		
Program Types	N	Covariate Mean (Pretest)	Unadjusted Posttest Mean	Adjusted Posttest Mean
No Program	58	20.52	28.64	31.71
Short Program	45	26.58	33.36	31.89
High Structure	22	29.09	24.96	21.87
Medium Structure	37	27.16	19.19	17.43
Low Structure	39	23.95	40.97	41.51

Figure 2

Personal Behaviors: Pretest and Posttest Unadjusted Scores



N---N No Program
S---S Short Program
H---H High Structure
M---M Medium Structure
L---L Low Structure

The covariance analysis of the data for these behaviors indicated that each of High ($p<.05$) and Medium ($p<.01$) Structure Programs was significantly better than Low Structure programs. However, differences between and among other groups were not significant. As noted previously for other behaviors, age was not a significant factor. Table 44 presents this data for inappropriate personal behaviors.

Table 44

Inappropriate Personal Behaviors:

Two-way Analysis of Covariance

Program, Age and Interaction Effects

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Probability of Significance
Covariates	35706.2	1	35706.2	44.9	0.000
Main effects	12732.2	6	2122.0	2.7	0.017
Program	12593.5	4	3148.4	4.0	0.004
Age	44.8	2	22.4	0.0	0.972
Interaction	6622.2	7	946.0	1.2	0.311
Error	147914.4	186	795.2		

Inappropriate Personal Behaviors

Difference Between Adjusted Posttest Means

Pair-wise Comparisons

Program Type	Short Program	High Structure	Medium Structure	Low Structure
No Program	0.18	10.16	13.67	9.80
Short Program		10.02	14.46	9.62
High Structure			4.44	19.64*
Medium Structure				24.07**

* p<.05 (HSD = 16.4 Using Tukey's Multiple Comparison Test)
** p<.01 (HSD = 19.5 Using Tukey's Multiple Comparison Test)

When chi square was used to test for significance of differences between observed and expected scores significant differences among groups were found on this subtest. Combined High and Medium Structure Program groups were superior to combined Low Structure, Short and No Program groups. There were no significant differences between High and Medium Structure and none among the other three groups. Table 45 gives percentages of students who deviated in both directions from their predicted score.

Table 45

Inappropriate Personal Behaviors

Deviations from Expected Posttest Scores[1]

			Percentages of Children	
Program Types		N	≤ Predicted Score	> Predicted Score
No Program	(1)	58	56.9	43.1
Short Program	(2)	45	55.6	44.4
High Structure	(3)	22	68.2	31.8
Medium Structure	(4)	37	81.1	18.9
Low Structure	(5)	39	48.7	51.3

[1] Expected posttest scores were derived by the regression of pretest scores on posttest scores.

$X^2 = 10.16$; df = 4; p = .0379

Summary of Posthoc Tests

Programs Compared	X^2	df	Probability
1 + 2 + 5 vs. 3 + 4	7.59	1	.0059
1 vs. 2 vs. 5	0.68	2	.7134
3 vs. 4	0.66	1	.4180

Inappropriate repetitive behaviors. Comparison of before and after summer programming mean scores for each group revealed that no group regressed in inappropriate repetitive behaviors. Short and Low Structure programs retained the behaviors exhibited earlier while the No Program group improved behaviors slightly. The greatest improvement in behavior, that is, decrease in scores on inappropriate repetitive behaviors were in the Medium and High Structure groups. Table 46 gives pretest and posttest mean scores, including adjusted posttest averages for each group. Figure 3 depicts the unadjusted scores for each group before and after summer programming.

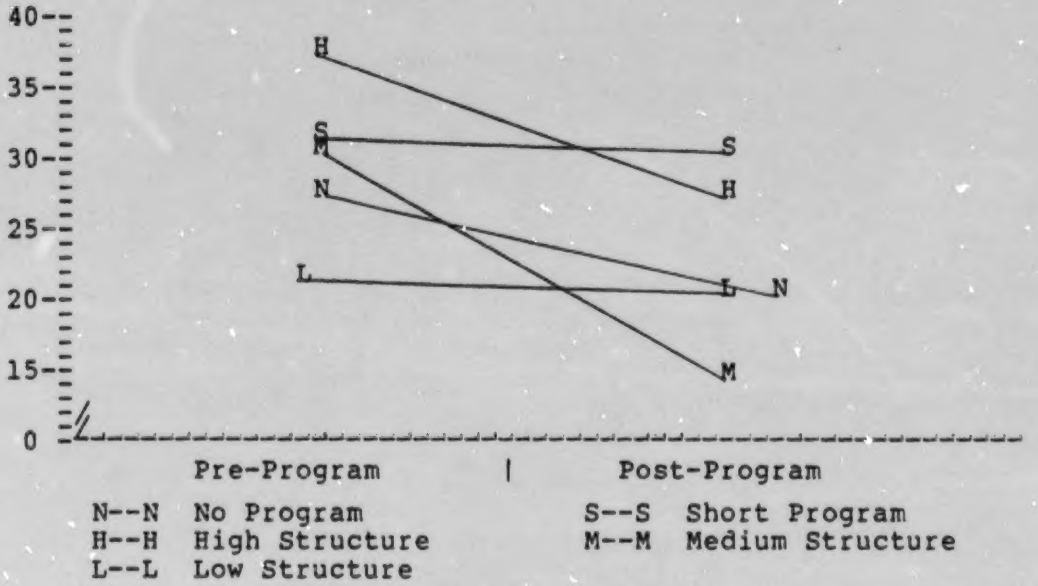
Table 46

Repetitive Behaviors: Pretest and Posttest Scores

		Inappropriate Behaviors per 15 min.		
Program Types	N	Covariate Mean (Pretest)	Unadjusted Posttest Mean	Adjusted Posttest Mean
No Program	58	28.41	21.46	22.43
Short Program	45	32.33	31.46	29.25
High Structure	22	37.91	27.63	25.52
Medium Structure	37	31.08	14.57	14.56
Low Structure	39	21.87	21.39	23.68

Figure 3

Repetitive Behaviors: Pretest and Posttest Scores



When means of different program groups were compared on repetitive behaviors, statistically significant differences existed (p<.01) between Medium Structure program and each of the others, with the Medium Structure program having the lowest mean score, that is, doing better than the others. In addition, the Short Program had significantly higher scores (p<.01) than any of the other programs: High, Medium and Low Structure, as well as No Program. Consistent with the findings for the other behaviors, age was not a significant factor. Table 47 indicates these results from the two-way analysis of covariance for inappropriate repetitive behaviors.

Table 47

Repetitive Behaviors: Two-way Analysis of Covariance

Program, Age and Interaction Effects

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Probability of Significance
Covariates	17812.5	1	17812.5	39.1	0.000
Main effects	6870.5	6	1145.1	2.5	0.023
Program	4265.8	4	1066.7	2.4	0.057
Age	1123.1	2	561.5	1.2	0.294
Interaction	5968.0	7	852.6	1.9	0.076
Error	84695.4	186	455.4		

Repetitive Behaviors

Differences Between Adjusted Posttest Means

Pairwise Comparison

Program Types	Short Program	High Structure	Medium Structure	Low Structure
No Program	6.82**	3.09*	7.87**	1.25
Short Program		3.73**	14.69**	5.57**
High Structure			10.96**	1.84
Medium Structure				9.12**

* p<.05 (HSD = 2.96 Using Tukey's Multiple Comparison Test)
** p<.01 (HSD = 3.53 Using Tukey's Multiple Comparison Test)

Table 48 indicates that a significantly smaller proportion of children from the Short Program (42%) had fewer than or equal to the number of behaviors predicted than each of: No Program (71%), Medium Structure Program (78%) and Low Structure Program (97%). Table 48 displays results of the chi square tests of significance among groups.

Table 48
Repetitive Behaviors

Deviations from Expected Posttest Scores[1]

Program Types		N	Percentage of Children $\leq$ Predicted Score	 > Predicted Score
No Program	(1)	58	70.7	29.3
Short Program	(2)	45	42.2	57.8
High Structure	(3)	22	54.5	45.5
Medium Structure	(4)	37	78.4	21.6
Low Structure	(5)	39	66.7	33.3

[1] Expected posttest scores were derived by the regression of pretest scores on posttest scores.

$X^2 = 14.49$; df = 4; p = .0059

Summary of Posthoc Tests

Programs Compared	X^2	df	Probability
1 vs. 2	7.31	1	.0068
1 vs. 3	1.21	1	.2719
1 vs. 4	0.35	1	.5545
1 vs. 5	0.39	1	.8444
2 vs. 3	0.47	1	.4907
2 vs. 4	9.50	1	.0021
2 vs. 5	4.08	1	.0433
3 vs. 4	2.66	1	.1031
3 vs. 5	0.44	1	.5074
1 vs. 5	0.78	1	.3769

Inappropriate interpersonal behaviors. The frequency of occurrence of these behaviors was very low for all groups. Unadjusted posttest means varied only from .24 to 2.80. Therefore, no significant differences were found among groups. Neither type of program nor age was significant. Table 49 displays results of analysis of covariance for inappropriate interpersonal behaviors.

Table 49

Inappropriate Interpersonal Behaviors: Pretest and Posttest Scores

		Inappropriate Behaviors per 15 min.		
Program Types	N	Covariate Mean (Pretest)	Unadjusted Posttest Mean	Adjusted Posttest Mean
No Program	58	0.64	0.85	1.17
Short Program	45	1.13	2.80	2.46
High Structure	22	0.86	1.00	1.07
Medium Structure	37	0.78	0.24	0.43
Low Structure	39	1.18	1.10	0.61

Two-way Analysis of Covariance

Program, Age and Interaction Effects

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Probability of Significance
Covariates	3370.6	1	3370.6	130.0	0.000
Main effects	100.9	6	16.8	0.9	0.532
Program	99.1	4	24.8	0.6	0.694
Age	2.3	2	1.2	0.8	0.432
Interaction	97.3	7	13.9	0.9	0.545
Error	4823.4	186	254.9		

Difference Between Adjusted Posttest Means

Pair-wise Comparisons

Program Type	Short Program	High Structure	Medium Structure	Low Structure
No Program	1.29	0.10	0.74	0.56
Short Program		1.39	2.03	1.85
High Structure			0.64	0.46
Medium Structure				0.18

When groups were compared on the basis of children attaining predicted posttest scores in this area, no significant differences were found. Medium and High Structure groups had the highest and Low Structure the lowest proportion of children reaching or surpassing the level of post-program scores predicted for them. Table 50 gives the percentages of those who reached and who did not reach predicted posttest scores.

Table 50

Inappropriate Interpersonal Behaviors

Deviations from Expected Posttest Scores[1]

Program		N	Percentage of Children	
			$\leq$ Predicted Score	> Predicted Score
No Program	(1)	58	77.6	22.43
Short Program	(2)	45	84.4	15.6
High Structure	(3)	22	90.9	9.1
Medium Structure	(4)	37	91.9	8.1
Low Structure	(5)	39	71.8	28.2

[1] Expected posttest scores were derived by the regression of pretest scores on posttest scores.

$X^2 = 7.36$; df = 4; p = .1179

Total inappropriate behaviors. An inspection of changes in pretest and posttest scores revealed that total inappropriate behaviors decreased in the same proportion in the Medium and High Structure groups. There was regression to more inappropriate behaviors for each of the other groups at a parallel rate. Table 51 displays scores before and after programs, including adjusted posttest scores. Figure 4 depicts the regression as well as the improvements in total inappropriate behaviors unadjusted scores for the various groups.

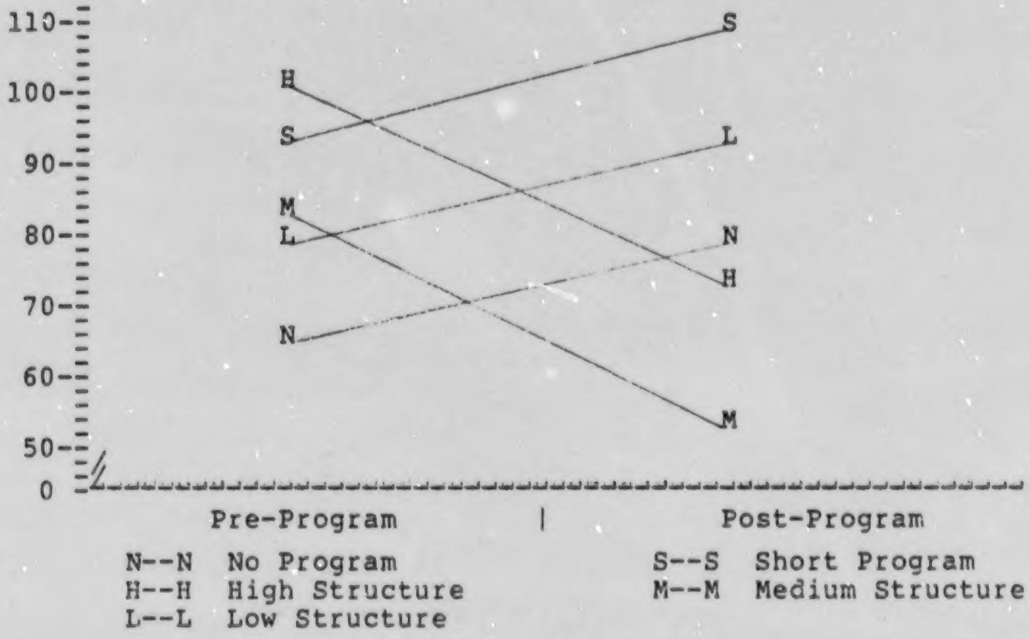
Table 51

Total Inappropriate Behaviors: Pretest and Posttest Scores

		Inappropriate Behaviors per 15 min.		
Program Types	N	Covariate Mean (Pretest)	Unadjusted Posttest Mean	Adjusted Posttest Mean
No Program	58	65.05	80.86	95.78
Short Program	45	93.71	110.67	97.97
High Structure	22	101.00	73.32	57.53
Medium Structure	37	83.76	51.97	51.12
Low Structure	39	80.10	94.72	96.32

Figure 4

Total Inappropriate Behaviors: Pretest and Posttest Scores



The adjusted posttest means of the total scores on the Inappropriate Behaviors Observation Checklist revealed significantly lower (and therefore, better) mean scores for both High Structure (p<.01) and Medium Structure (p<.01) programs when compared to any of the No Program, Short Program or Low Structure Program. There were no significant differences between the means of the High and Medium Structure groups nor between the No Program, Short Program and the Low Structure Program. The factor of age was not significant when considered singly as a main effect (p<.07) or jointly in interaction with type of program (p<.315). Table 52 displays the two-way analysis of covariance for the total inappropriate behavior scores.

Table 52

Total Inappropriate Behaviors:

Two-way Analysis of Covariance

Program, Age and Interaction Effects

Source	Sum of Squares	Degrees of Freedom	Mean Squares	F Ratio	Probability of Significance
Covariates	185109.4	1	185109.4	155.0	0.000
Main effects	88947.9	6	14824.7	12.4	0.000
Program	74599.8	4	18649.9	15.6	0.000
Age	6439.7	2	3219.8	2.7	0.070
Interaction	9877.9	7	1411.1	1.2	0.315
Error	222103.1	186	1194.1		

Total Inappropriate Behaviors

Differences Between Adjusted Posttest Means

Program Type	Short Program	High Program	Medium Program	Low Program
No Program	2.19	38.25**	44.16**	0.54
Short Program		40.44**	46.85**	0.35
High Structure			6.41	38.79**
Medium Structure				45.20**

* $p<.05$ (HSD = 20.18 Using Tukey's Multiple Comparison Test)
**$p<.01$ (HSD = 23.96 Using Tukey's Multiple Comparison Test)

A chi square analysis of deviations from expected posttest scores revealed no significant difference between the Medium and High Structure programs. However, each of these had a significantly greater impact in reducing the total inappropriate behaviors when compared with Low Structure, Medium Structure and No Program groups. Less than one-half of the students in the No Program, Short Program and Low Structure had fewer than or equal to the number of inappropriate behaviors predicted based on their entry level performance while in the High and Medium Structure groups the percentages were 91 and 87, respectively. Table 53 shows the results of the analysis on the total scores of the Inappropriate Behaviors Observation Checklist.

Table 53

Deviations from Expected Posttest Scores[1]

Program		N	Percentage of Pupils $\leq$ Predicted Score	 > Predicted Score
No Program	(1)	58	41.4	58.6
Short Program	(2)	45	40.0	60.0
High Structure	(3)	22	90.9	9.1
Medium Structure	(4)	37	86.5	13.5
Low Structure	(5)	39	46.2	53.8

[1] Expected posttest scores were derived by the regression of pretest scores on posttest scores.

$X^2 = 36.02$; df = 4; p = .0000

Summary of Posthoc Tests

Programs Compared	X^2	df	Probability
1 + 2 + 5 vs. 3 + 4	33.73	1	.0000
1 vs. 2 vs.5	0.35	2	.8374
3 vs. 4	0.01	1	.9269

The results of the statistical analysis of the data on inappropriate behaviors revealed that some summer programs had significant positive effects on behaviors as measured by the Inappropriate Behaviors Observation Checklist. This was the case for High and Medium Structure programs, which had equally good effects on behaviors. Not only did these types of programs prevent regression to increased inappropriate behaviors, they produced a decrease in inappropriate behaviors. Therefore, both achieved their behavioral goals, as measured by the Inappropriate Behaviors Observation Checklist.

Short and Low Structure programs did not show significant positive effects as measured by the Inappropriate Behaviors Observation Checklist. On the contrary, regression to more inappropriate behaviors was evident in these programs, as it was for the children from No Programs. However, it must be noted that neither the Low Structure nor the Short Program types had behavior change as a specific goal. Therefore, other types of measures may be needed to show the positive effects of recreational programs such as the Short Program and the Low Structure Program.

Impact on Skills

The second major area of concern was the effects of summer programming on the skills of severely handicapped students. The following questions were asked.

1) Do summer programs for severely handicapped students prevent regression in skills?

2) Do summer programs for severely handicapped students produce an increase in skills?

To answer these questions, the Teacher Interview Skills Checklist was developed and utilized upon resumption of regular schooling in September. It covered the general areas pertinent to the education of skills for these children.

Each skill area was recorded in one of the following categories: much or some gain, retention, much or some loss. The data obtained with this instrument consisted of teacher perceptions of child's level of functioning in each skill area after summer programs compared with the end of the previous school year.

Significance of differences between groups was tested with chi square for loss, retention and gain in each area.

Gross Motor Skills

In the area of gross motor skills all groups showed that the largest proportion of children either retained or gained in skills. Groups varied from 0 to 27% of children who regressed in this area with the greatest loss in Short programs. High and Medium Structure groups had the smallest proportion of children regressing. In the High Structure programs, all the children either retained or gained with over one-half of the children gaining in gross motor skills during the summer.

Chi square analysis revealed significant differences ($p<.05$) between combined High and Medium Structure programs compared to combined No, Short and Low Structure programs. In addition, each of High and Medium Structure programs differed significantly ($p<.05$) from the other three combined. Further testing indicated significant differences ($p<.05$) between High and Medium Structure groups on loss, retention and gain, as well as between them when retention was compared with gain ($p<.01$). A greater proportion of children retained gross motor skills in the Medium than in the High Structure programs while the reverse was true for the proportion of children who gained in these skills. Table 54 gives the results of chi square analysis as well as numbers and percentages of children who lost, retained or gained gross motor skills.

Table 54

Gross Motor Skills: Loss, Retention, Gain

			Numbers & Percentages of Children					
Program Types		N	Loss		Retention		Gain	
			N	%	N	%	N	%
No Program	(1)	65	11	17	47	72	7	11
Short Program	(2)	22	6	27	13	59	3	14
High Structure	(3)	14	0	0	6	43	8	57
Medium Structure	(4)	28	1	4	26	92	1	4
Low Structure	(5)	28	5	18	17	61	6	21

$X^2 = 21.36$;   df = 4; $p = .006$

Summary of Posthoc Tests

Programs Compared	X^2	df	Probability
1 + 2 + 5 vs. 3 + 4	8.93	1	.0115
1 vs. 2 vs. 5	3.20	2	.5256
3 vs. 4	8.57	1	.0138
3 vs. 4*	7.68	1	.0056
3 vs. 1 + 2 + 5	8.93	1	.0115
4 vs. 1 + 2 + 5	7.51	1	.0234

* retain vs. gain

Fine Motor Skills

All groups had a much higher proportion of children who retained or gained skills than those who lost fine motor skills. The percentages of children who lost ranged from 0 loss for the High Structure group to 18% for the Short Program group. One-half of the children in High Structure programs gained while the next highest gain, in the Low Structure groups only about one-tenth gained in fine motor skills.

Differences between program groups were statistically significant in fine motor skills ($p<.001$). Posthoc tests revealed that High and Medium Structure combined groups differed significantly ($p<.05$) from Low Structure, No and Short programs combined. Further analysis indicated that there were no statistically significant differences between Low Structure, No and Short Program groups. High and Medium Structure groups differed significantly ($p<.01$) and these significant differences were between retention and gain ($p<.001$). More of the children in High Structure experienced gains while more of those in Medium Structure retained skills in this area. When High Structure Program was compared to all the others combined significant differences ($p<.001$) were found, but there were no significant differences among any of the others. Table 55 displays this data with chi square analysis results.

Table 55

Fine Motor Skills: Loss, Retention and Gain

Program Type		N	Numbers & Percentages of Children					
			Loss		Retention		Gain	
			N	%	N	%	N	%
No Program	(1)	65	6	9	57	88	2	3
Short Program	(2)	22	4	18	17	77	1	5
High Structure	(3)	14	0	0	7	50	7	50
Medium Structure	(4)	27	2	7	24	89	1	4
Low Structure	(5)	28	3	11	22	78	3	11

$X^2 = 35.66$; df = 4; p= .000

Summary of Posthoc Tests

Programs Compared	X^2	df	Probability
1 + 2 + 5 vs. 3 + 4	8.41	1	.0149
1 vs. 2 vs. 5	3.71	2	.4469
3 vs. 4	13.01	1	.0014
3 vs. 4*	11.65	1	.0006
3 vs. 1 + 2 + 4 + 5	32.19	1	.0000
1 vs. 2 vs. 4 vs. 5	4.41	3	.6270

* retain vs. gain

Self-Help Skills: Eating

In all programs a much smaller percentage of children lost skills than retained or gained skills in eating. The losses ranged from 3% to 14% with a small proportion of children from Medium and Low Structure groups losing skills and a greater proportion from the High Structure program. The gain in skills was greatest in High Structure Programs, followed by the Short Programs.

When program types were compared on this skill using chi square analysis, there were no significant differences among them. Table 56 displays the data for this subtest.

Table 56

Eating Skills: Loss, Retention and Gain

Program Type		N	Numbers & Percentages of Children					
			Loss		Retention		Gain	
			N	%	N	%	N	%
No Program	(1)	65	6	9	54	83	5	8
Short Program	(2)	26	3	11	20	78	3	11
High Structure	(3)	14	2	14	8	65	4	21
Medium Structure	(4)	28	1	4	25	89	2	7
Low Structure	(5)	32	1	3	28	88	3	9

$X^2 = 7.06$; df = 4; $p = .5299$

Self-Help Skills: Toileting

In all programs, few children lost skills in this area. No children regressed in the Medium Structure group and the highest proportion of children who lost toileting skills (18%) was from the Short Program group. Gains were greatest in the High Structure group, nearly twice the proportion of the next group, Medium Structure.

Chi square testing of differences among program groups in toileting skills indicated that no significant differences existed. Table 57 displays this information.

Table 57

Toileting Skills: Loss, Retention and Gain

Program Type		N	Loss		Retention		Gain	
			N	%	N	%	N	%
No Program	(1)	62	4	6	56	91	2	3
Short Program	(2)	22	4	18	17	77	1	5
High Structure	(3)	13	1	8	10	77	2	15
Medium Structure	(4)	24	0	0	22	92	4	8
Low Structure	(5)	28	2	7	24	86	2	7

Numbers & Percentages of Children (spanning Loss, Retention, Gain)

$\chi^2 = 8.897$; df = 4; p = .3500

Self-Help Skills: Dressing

Although losses were small for all groups, there were no losses for the High and Medium Structure programs, while 11% to 16% of the children in the No, Short and Low Structure programs lost skills in dressing. One-third of the children in the High Structure programs made gains in dressing skills, follwoed by one-tenth of the children in the Short Program groups.

Utilizing chi square testing, statisically significant differences were found among the various groups in this skill area (p<.01). A significantly higher proportion of the High Structure Program groups gained skills in dressing (p<.001) than the other programs combined which did not differ significantly from one another. High and Medium Structure groups differed significantly (p<.01) from one another on retention versus gain, with a higher proportion of the former gaining, and the latter retaining dressing skills. Information on loss, retention and gain in dressing skills is located in Table 58.

Table 58

Dressing Skills: Loss, Retention and Gain

			Numbers & Percentages of Children					
Program Type		N	Loss		Retention		Gain	
			N	%	N	%	N	%
No Program	(1)	62	10	16	51	82	1	2
Short Program	(2)	19	2	11	15	78	2	11
High Structure	(3)	13	0	0	9	69	4	31
Medium Structure	(4)	24	0	0	24	100	0	0
Low Structure	(5)	26	3	12	22	86	1	4

$X^2 = 25.90$; df = 4; p = .001

Summary of Posthoc Tests

Programs Compared	X^2	df	Probability
1 + 2 + 4 + 5 vs. 3	18.21	1	.0001
1 vs. 2 vs. 4 vs. 5	9.39	3	.1526
3 vs. 4*	8.28	1	.0040

* retain vs. gain

Cognitive Skills

When children in program groups were compared in the area of cognitive skills, losses ranged from none in the High and Medium Structure groups to 20% of children in the No Program group.

Significant differences ($p<.05$) were found from the chi square analysis. High and Medium Structure groups combined were significantly better ($p<.05$) than the Low Structure, No Program and Short Program groups combined. These differences can be found in Table 59.

Table 59
Cognitive Skills: Loss, Retention and Gain

			Numbers & Percentages of Children					
Program Type		N	Loss		Retention		Gain	
			N	%	N	%	N	%
No Program	(1)	63	13	20	46	74	4	6
Short Program	(2)	24	2	8	20	84	2	8
High Structure	(3)	15	0	0	11	73	4	27
Medium Structure	(4)	27	0	0	24	89	3	11
Low Structure	(5)	30	2	7	25	83	3	10

$\chi^2 = 16.77$; df = 4; p = .0325

Summary of Posthoc Tests

Programs Compared	χ^2	df	Probability
1 + 2 + 5 vs. 3 + 4	8.69	1	.0129
1 vs. 2 vs. 5	4.29	2	.3678
3 vs. 4*	1.68	1	.1949

*retain vs. gain

Receptive Communication Skills

There was no receptive communication skill loss in children from three of the groups: Short Program, High and Medium Structure programs. In the other two groups: No Program and Low Structure programs, 16% and 13% of the children showed losses in the respective programs. There were no chuildren gaining skills in Medium Structure and Short programs

Chi square analysis revealed a significant overall difference (p<.001) in receptive communication skill change among groups. The No Program group had a significantly greater loss (p<.01) than the Short and Medium Structure programs combined, as well as a significantly greater loss (p<.01) than the High Structure Program. The High Structure program was significantly superior in the proportion of children who gained skills (p<.01) to all the other groups combined, as well as to the No Program group (p<.01) and to the combined Medium Structure and Short Program groups (p<.001). Table 60 displays this data.

Table 60

Receptive Communication Skills: Loss, Retention and Gain

Program Type		N	Numbers & Percentages of Children					
			Loss		Retention		Gain	
			N	%	N	%	N	%
No Program	(1)	62	9	15	42	80	9	5
Short Program	(2)	25	0	0	25	100	0	0
High Structure	(3)	15	0	0	10	67	5	33
Medium Structure	(4)	28	0	0	28	100	0	0
Low Structure	(5)	31	4	13	21	68	6	19

$\chi^2 = 32.99$; df = 4; p = .0001

Summary of Posthoc Tests

Programs Compared	χ^2	df	Probability
1 + 2 + 4 + 5 vs. 3	13.43	1	.0012
1 vs. 2 vs. 4 vs. 5	22.29	3	.0011
1 + 2 + 4 vs. 5	13.0	1	.0014
1 vs. 2 vs. 4	11.45	2	.0200
1 vs. 2 + 4	11.45	1	.0030
3 vs. 5	2.76	1	.2512
1 vs. 3	11.92	1	.0025
3 vs 2 + 4*	19.07	1	.0000
1 vs. 5	4.99	1	.0825

* retain vs. gain

Expressive Communication Skills

There were no significant differences among groups on expressive communication skills, although 19% of the children in the No Program group experienced skill loss while in the other groups from 4% to 10% of the children lost skills.

Results of chi square analysis are given in Table 61.

Table 61

Expressive Communication Skills: Loss, Retention and Gain

Program Type		N	Numbers & Percentages of Children					
			Loss		Retention		Gain	
			N	%	N	%	N	%
No Program	(1)	63	12	19	42	67	9	14
Short Program	(2)	24	1	4	20	83	3	13
High Structure	(3)	14	1	7	9	64	4	29
Medium Structure	(4)	28	1	4	24	85	3	11
Low Structure	(5)	31	3	10	24	77	4	13

$\chi^2 = 10.027$;   df = 4;   p = .2631

Social Interaction

In percentages the loss varied from 4% of the students in the Short Program and Medium Structure groups to 16% of the students with No Program who lost skills in this area. Two-thirds of the students in High Structure programs and one-half in each of Medium and Low Structure programs gained social interaction skills during summer programs. In all groups retention and gain were much greater than loss.

Chi square analysis revealed significant differences ($p<.01$) among the groups in social interaction skill change. High and Medium Structure programs combined were significantly better ($p<.001$) than the other three combined. Further analysis indicated that the High Structure Program was significantly better than each of: No Program (p<.001), Short Program (p<.001), Low Structure Program (p<.05) and Medium Structure Program (p<.05). Differences in High and Medium Structure groups were in retention vs. gain (p<.01), with a greater proportion of students in High Structure gaining, while a greater proportion of students in Medium Structure retained skills. Medium Structure was significantly better (p<.05) than No Program, but did not differ significantly from the others. Table 62 shows the data for all groups.

Table 62

Social Interaction Skills: Loss, Retention and Gain

			Numbers & Percentages of Children					
Program Type		N	Loss		Retention		Gain	
			N	%	N	%	N	%
No Program	(1)	64	10	16	49	78	5	6
Short Program	(2)	24	1	4	21	88	2	8
High Structure	(3)	15	1	7	4	23	10	67
Medium Structure	(4)	28	1	4	20	71	7	25
Low Structure	(5)	28	3	11	18	64	7	25

$\chi^2 = 33.72$; df = 4; p = .0100

Summary of Posthoc Tests

Programs Compared	χ^2	df	Probability
1 + 2 + 5 vs. 3 + 4	15.64	1	.0004
1 vs. 2 vs. 5	20.67	2	.0004
1 vs. 2	2.10	1	.3496
1 vs. 5	20.17	1	.0000
2 vs. 5	3.72	1	.1554
3 vs. 4	7.99	1	.0183
3 vs. 4*	7.86	1	.0050
3 vs. 1 + 2 + 4 + 5	23.59	1	.0000
3 vs. 1	27.37	1	.0000
3 vs. 2	15.64	1	.0004
3 vs. 5	7.16	1	.0278
4 vs. 1	6.84	1	.0326
4 vs. 2	2.51	1	.2852
4 vs. 5	1.11	1	.5754

* retain vs. gain

Classroom Behavior Skills

None of the students in the High Structure program lost while 28% of those in No Program and 23% of those in the Short Program lost skills. The Low Structure program students lost 19% and the Medium Structure program students lost 11%.

When a chi square analysis was performed on this area, there were significant differences among the groups ($p<.05$). High and Medium Structure groups combined were significantly better ($p<.001$) than the other three combined. When comparisons were made with loss versus retention plus gain for these same groupings, High and Medium Structure programs were significantly better ($p<.05$) than the other three; and when the comparisons were of retention versus gain for the same groupings, significant differences were found ($p<.01$). Table

63 gives the actual losses and gains in this area.

Table 63

Classroom Behavior Skills: Loss, Retention & Gain

Program Type		N	Loss		Retention		Gain	
			N	%	N	%	N	%
No Program	(1)	65	18	28	39	60	8	12
Short Program	(2)	26	6	23	19	73	1	4
High Structure	(3)	15	0	0	8	53	7	47
Medium Structure	(4)	28	3	11	17	60	8	29
Low Structure	(5)	31	6	19	20	65	5	16

Numbers & Percentages of Children

$\chi^2 = 20.03$; df = 4; $p = .0102$

Summary of Posthoc Tests

Programs Compared	χ^2	df	Probability
3 vs. 4	2.62	1	.2704
1 vs. 2 vs. 5	3.07	2	.5468
1 + 2 + 5 vs. 3 + 4	15.02	1	.0005
1 + 2 + 5 vs. 3 + 4*	6.16	1	.0130
1 + 2 + 5 vs. 3 + 4**	8.07	1	.0045

* loss vs. retention plus gain
** retention vs. gain

Overall Skill Loss, Retention and Gain

Skill loss in all areas appeared to be minimal compared to skills retained and gained. In general, many more students retained their skills or gained new skills than they lost, and this was true for all programs types. Significantly fewer students, however, lost skills if they were from the High and Medium Structure groups. In addition, a greater proportion of students gained skills if they were in the High Structure program.

When loss, retention and gain were averaged for all the skills, Medium and High Structure programs had the same proportion of children losing skills as well as the same proportion of children with combined retained and gained skills. When skill gain alone was judged, High Structure and Low Structure programs had a higher proportion of children gaining skills than did Medium Structure programs. However, the latter programs surpass all other groups in the proportion of children retaining skills. The percentage of children who lost skills in the Low Structure, Short and No Program groups was similar.

It must be noted that the data on which the analysis of skill loss, retention and gain was based was obtained from judgments of classroom teachers. A great deal of variation in assessment is possibly present, thus making actual comparisons from group to group more difficult. Therefore, caution is necessary in the interpretation of this data.

Table 63 displays average loss, retention and gain percentages for all skills by program types.

Table 64

Average Percentage Loss, Retention and Gain

Program Types	Percentages of Children		
	Loss	Retention	Gain
No Program	15.5	77.5	7.0
Short Program	12.2	79.9	7.9
High Structure	3.6	60.9	35.5
Medium Structure	3.4	86.7	9.9
Low Structure	11.0	71.8	17.2

Process-Product Analysis

To ascertain if certain emphases in summer program interactions were correlated with changes in behaviors of children, the activities of staff and children during summer programs were correlated with changes in children's behaviors. The Pearson product-moment correlation coefficient was utilized for this purpose.

Observed staff interactions had been recorded according to whether they were primarily setting-oriented or if staff were relating directly to the children. This latter category was divided into direct instruction, positive reinforcement and non-instructional, that is tasks in which staff carried on activities with children, such as playing, listening, talking, etc. but without instructing the children.

There were significant negative correlations ($p<.001$) between staff use of direct instruction and of positive reinforcement with change in total inappropriate behaviors.

This revealed that as more time was spent in these tasks, total inappropriate behaviors decreased. Direct instruction time also correlated negatively at a significant level (p<.01) with personal inappropriate behaviors which therefore, decreased as the time of direct instruction increased.

However, there were significant positive correlations between time spent in non-instructional tasks and total inappropriate behaviors (p<.001), personal and repetitious inappropriate behaviors (p<.01), and passive inappropriate behaviors (p<.05). This indicates that as time spent in such tasks increased, inappropriate behaviors also increased. The type of staff activity, therefore, was related to the changes in children's inappropriate behaviors.

Children's activities had been observed during the summer for various types of positive and negative inner-directed (involved with self) and outer-directed (involved with others) interactions. For the purposes of this analysis, all positive activities were grouped together, whether they were directed toward oneself or towards others; the same thing was done with negative behaviors. These were then correlated with the change in inappropriate behaviors before and after summer programs to see if what children did during the summer programs had a direct relationship to their post-program inappropriate behaviors.

There were significant positive correlations between children's negative summer activities and the total inappropriate behavior increase (p<.01), as well as the increase in personal inappropriate behaviors (p<.05). Conversely, positive summer activities correlated negatively with inappropriate behavior increase. Therefore, as children's positive summer activities increased, their inappropriate behaviors decreased in the post-summer program testing period.

Table 65 displays the relationship between children's change in inappropriate behaviors and the summer activities of staff, as well as the relationship between children's summer activities and their inappropriate behavior change.

Table 65

Relationship of Activities of Summer Staff and Children with Changes in Children's Inappropriate Behaviors

Staff Activity	Children's Inappropriate Behaviors			
	Passive	Personal	Repetitious	Total
Setting-oriented	-.13	-.06	-.09	-.11
Non-instructional	.21*	.31**	.24**	.50***
Direct instruction	-.05	-.24**	-.17*	-.34***
Positive reinforcement	-.18*	-.21*	-.13	-.37***
Children's Activity				
Negative activities	.08	.23*	.09	.27**
Positive activities	-.08	-.23*	-.09	-.27**

* p<.05
** p<.01
*** p<.001

CONCLUSIONS AND RECOMMENDATIONS

Impact on Children

Do any or all summer programs prevent regression or improve severely handicapped children's skills and behaviors?

Conclusions

From the data contained in preceding sections, it can be concluded that all summer programs were successful in enabling severely handicapped children to retain skills during the summer vacation. However, the programs which were superior in skill gain were six-week High Structure programs. But when skill retention is considered combined with skill gain, six-week Medium Structure programs were as good as the High Structure programs. Although not significantly better statistically, six-week Low Structure programs had a tendency to have a higher skill retention than Short programs, which in turn were better in retention than no program groups. Therefore, longer programs with emphasis on skills helped severely handicapped children retain skills to a significantly greater degree than did the long and short recreational programs that did not stress skills.

It is apparent from the results of the observation data on inappropriate behaviors that High and Medium Structure summer programs had a significantly greater impact in reduction of inappropriate behaviors than did the long or short recreational programs. This impact was of a similar magnitude for High and Medium Structure programs. No, Short and Low Structure programs did not produce decreases in inappropriate behaviors. On the contrary, there was regression to more inappropriate behaviors for children from these programs. These increases were of similar proportions for the three program groups. One can conclude that High and Medium Structure programs had a similar positive impact on children's behaviors, while Low Structure, Short and No Program groups had a similar negative impact.

It must be noted that High and Medium Structure programs were, in a sense, a continuation of school programs. These summer programs were organized and administered by the same staff who planned children's school programs; their goals were similar to those of school programs; children's individualized programs were continued, especially in the High Structure programs. However, such was not the case for the recreational programs which were separate from school programs both in organization and in goals.

Parents and staff from some of the programs mentioned the lack of time for individualized work with children, as well as the lack of adequate staff. It was evident to the observers that when some of the children did not have almost constant attention from an adult they quickly drifted into a world of their own. The end result was repetitive, stereotyped, self-stimulating or completely passive behaviors, rather than attention to the activities at hand. Where there was a consistently low adult-child ratio, the children were generally kept on task and learning resulted.

Longer programs for more children is supported by parent responses as well as the results of the statistical analysis of the data which consistently found longer programs produced better results.

This study revealed that the summer break with no summer programming resulted in regression in skills and behaviors for severely handicapped children. This was also the case for children with recreational programs, both long and short. However, attendance at particular types of summer programs prevented regression and improved children's skills and behaviors. But this study did not demonstrate if these positive effects continue to be evident over a longer period of time. If there are no long-term benefits, then summer programs may be unnecessary. In addition, if children from non-skill and behavior-oriented programs quickly lose the inappropriate behaviors acquired and regain the skills lost during the summer, then the content of programs may not be important. A follow-up study during the subsequent school year is required to answer the question regarding the long-term benefits of summer programs in general, as well as the particular types of programs.

Recommendations

It is the recommendation of this study:

1. that summer programs for severely handicapped children continue to be funded.
2. that six-week or longer programming be implemented for all severely handicapped children.
3. that emphasis be placed on improvement of children's skills and behaviors in all summer programs.
4. that all programs continue to be funded sufficiently to provide a child-staff ratio which will enable an almost constant attention be given to the development of skills and appropriate behaviors.
5. that further research be carried out during the subsequent school year to assess long-term benefits of summer programs and to ascertain if differences in skills and behaviors immediately following summer programs are retained over a longer period of time.

Commentary

Parents and staff overwhelmingly supported the existence of summer programs for severely handicapped children and wanted their children in future programs. In no other type of item on the parent and staff questionnaire was there such a large majority who responded in the strongly agree and disagree categories.

Because teachers' opinions were the sole source of information used for the assessment of skills, the measures may not be directly comparable. This method of skill assessment was the only one feasible because of time constraints and because of the severity and multiplicity of handicapping conditions in these children.

Handicapped children tend to become unacceptable to others because of their frequent bizarre behaviors. Therefore, if we want the end result to be greater acceptability of the handicapped and greater acceptance by society, it is important that serious efforts be made to eliminate these behaviors.

In addition, these self-involved behaviors generally draw children away from reality and prevent them from remaining on task while they are being taught. In order to reduce these behaviors so that learning can take place, it is necessary to give the children almost constant attention and keep them occupied. Hence, the need for a very low adult-child ratio. Experience appears to indicate that for an adult to be able to devote a sufficient amount of time to keep each severely handicapped child occupied, a ratio of one adult to, at the most, two children is necessary.

Because of time restrictions for the study, post-program observation of behaviors took place towards the end of summer programs for both the Medium and High Structure groups. However, in recreational programs, it was necessarily carried out in September in the school setting. Perhaps this hiatus allowed children from short and long recreational programs to regress during the post- summer program break of two weeks or more. Two students for whom data was collected both at the end of summer programs and again in September regressed in behaviors following the break before regular schooling resumed. Had time allowed it would have been desirable to observe what kinds of changes occur in that short interval.

Processes and Procedures

What are the characteristics of particular summer programs, the methods and activities they utilize as well as the problems experienced in implementing their objectives?

Conclusions

From data collected on goals, processes and procedures during summer programs, one can conclude that programs varied in the activities they utilized to implement their objectives which differed according to the type of program. During these activities, there were also differences in the type of adult-child interactions. In some programs, there was a large proportion of negative inner directed (self-stimulatory or completely passive) behaviors, as well as a smaller percentage of positive responses to others. The failure to stem the occurrence of these negative inner-directed behaviors reinforced them as was evidenced by the significant relationships between negative summer behaviors and an increase in inappropriate behaviors during post-program assessment.

Programs differed in the amount of direct instructional activity accompanied by positive reinforcement. Data from the study showed that the greater the direct instructional time as well as the amount of positive reinforcement, the greater the reduction in inappropriate behaviors. Therefore, one can conclude that this aspect particular to High Structure programs was responsible for their great success in improving behaviors.

Some of the programs spent a considerably greater portion of time in general outer-directed activities (working with the children, but not in direct instruction) than did the High Structure programs. This aspect was correlated with an increase in inappropriate behaviors. It can be concluded, therefore, that this type of activity, evident especially in recreational programs, hindered improvement in behaviors.

Statistical analysis of the data revealed that Medium Structure programs which emphasized skills and behaviors and, at the same time, included a recreational component produced improvement similar to that of the High Structure programs with the unique emphasis of skill and behavior change. In addition, the recreational and social aspects of summer programs were a positive experience for the children, as evidenced by the highly favorable comments by parents and staff. It can be concluded, therefore, that programs with mixed (recreational combined with skill and behavior) emphasis are as beneficial to the children's skills and behaviors as those which are strictly skill and behavior goal oriented. But over and above these results, they have positive recreational and social benefits.

Recreation in an integrated setting with non-handicapped children was viewed by participating parents and staff as a positive factor in the lives of the handicapped and non-handicapped alike. This investigator concludes therefore, that although integrated recreational programs did not improve children's skills and behaviors in the same manner as the more educational programs, they did have benefits only indirectly measured by this study.

It can be concluded from questionnaire comments, as well as from observation of summer programs by researchers that the large-scale employment of university students was highly beneficial. Their youth and dynamism in carrying out programs was a positive factor for the children. In addition, it was a useful experience for the high school and university students who learned to work with and accept those "different" from themselves. Moreover, it was profitable to them as summer employment. For the programs, it proved financially advantageous as the cost of staff was less than it would have been otherwise.

However, from staff comments as well as summer program observations, this researcher concluded that summer staff were not always sufficiently prepared and trained for the difficult task of programming for severely handicapped children. Staff had received some prior training and in some programs staff had gained some familiarity with the children with whom they would be working during the summer. However, at times, staff did not seem to know how to keep children's attention or how to keep them involved. Self-stimulating activities which tend to occur frequently in severely handicapped children need to be stemmed immediately when they begin occurring. If they are allowed to continue, they become more difficult to eradicate. However, eradicated they must be for as long as the child is involved totally with self, (s)he cannot become involved with others or with learning. Observation of summer programs by this researcher conveyed the impression at times that severely handicapped children were left to drift into a world of their own. This occurred sometimes because staff did not know how to keep the severely handicapped child involved. At other times, they were too busy with the larger number of non-handicapped children in an integrated setting or with another handicapped child in a segregated setting.

The best methods must be utilized in working with severely handicapped children so that they can develop to the utmost of their potential, however limited it may be. Research indicates that, especially for young or less able individuals, verbal instruction alone and unaccompanied by any other sense stimulation tends to be less effective for learning than does a multi-sensory approach. Physical manipulation or assistance alone without preceding or accompanying verbal or nonverbal instruction also appears to be a less effective method of teaching. Greater use of positive reinforcement is always an aid to good teaching, formal or informal. However, program staff were observed utilizing the less effective methods.

The timing of approval of summer programs, and therefore, the hiring of staff appeared to be one of the problems associated with the best preparation of staff and of programs.

From the data gathered, it can be concluded that, in some of the programs, there was insufficient involvement of parents and of the community. In addition, observations and staff comments indicated that shortage of staff and of funds presented problems in some programs.

Recommendations

As a result of analysing processes and procedures in use in summer programs, it is recommended:

6. that recreation in an integrated setting be retained as one of the goals of summer programs
7. that increasing emphasis on skills and behaviors be accomplished within the structures of present program organizations without integrated recreation programs having to lose their primary focus.
8. that greater integration with non-handicapped children and the community be mandated for programs not now including this feature, thus providing greater normalization of handicapped individuals, but with the

degree and manner of implementation being allowed to differ according to local circumstances.

9. that greater involvement by parents and other community adults, as well as community organizations be required, not only to supplement the work of staff and provide funds, but also to provide society with the opportunity to develop more positive attitudes towards all individuals and groups who are "different".

10. that university and high-school students continue to be employed as summer staff.

11. that increased preparation of staff assigned to these children, especially staff lacking in training and experience with severely handicapped children be carried out before programs start. This preparation should be two-fold: information on handicapping conditions, as well as instructional strategies and tactics for working with handicapped children, in general; and specific knowledge of the level of functioning and individual needs of the particular children to be assigned to staff. The best staff preparation possible, therefore, cannot be too strongly recommended.

12. that program organizers, planners and staff become more aware of the most effective methods for facilitating learning, particularly in severely handicapped children and the need to analyze the kinds of activities taking place in their programs in order to utilize those most

conducive to helping these children.

13. that program funding be approved early enough to allow for adequate program planning and staff preparation.

Commentary

Parents indicated, in response to a questionnaire item, their agreement to increasing the emphasis on skills and behaviors. However, parents whose children attended recreational programs did not want to lose this aspect. There were many comments from parents and staff indicating that severely handicapped children need organized recreation and socialization perhaps even more than non-handicapped children who are able to get these on their own while the handicapped cannot.

Programs with integration of activities with non-handicapped children were about equal in number to those which were segregated but did take children on outings and field trips. However, by far the greater number of children were in the latter category as it was mostly in the rural areas where there are small numbers of handicapped children that complete integration of activities took place. In large centres and with larger numbers of children, although it may be more difficult to integrate, it is not less desirable.

In addition, in some programs, at least, there appears to be a need for greater involvement of the general public. Children are taken into the community for outings and field trips, which is a very positive thing, but there is also the need to have the handicapped accepted by the public and have the public involved in the programming.

The dynamism and genuine interest in handicapped children of the large numbers of university and high school students employed in most summer programs was impressive. In the opinion of the director of this study, who observed most of the programs in the province during the course of the summer, tremendously good work was being accomplished both for handicapped and non-handicapped children. Not the least beneficiaries were the university students themselves.

Summer staff need more preparation. It would be particularly useful to access for training individuals who have specialized training and experience in the area of handicapping and in the best instructional methods for severely handicapped children. The comments on the need for staff preparation is not intended as an indictment of staff in summer programs but rather a call for more adequate preparation for all staff. This researcher believes that the comment of a parent who credited the staff member who worked with this particular child capsulizes well the goals of programs and the results of the good work of summer program staff: " ... has become a very happy and skillful boy over the summer. He seems really happy!"

Implementation of the recommendations of this study would provide an environment most conducive to the full development of the potential of severely handicapped children.

The focus on behaviors and on skill development to produce an individual more independent and more socially acceptable would be complemented by enabling that individual to cope in a larger social context more open and accepting of the handicapped individual. The increased independence of the child and the increased acceptance by society of individuals who are "different", the lesser the costs of long-term care and education for severely handicapped children.

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Appendix A

The Efficacy of Summer Programs
for
The Dependent Handicapped
and
The Sensory Multihandicapped:

A Survey

ALBERTA EDUCATION
SPECIAL EDUCATIONAL SERVICES

The Efficacy of Summer Programmes for the Dependent Handicapped and the Sensory Multihandicapped:

A Survey

Ms. Donna Patterson
Research Assistant

March 1983

Executive Summary

This report was developed as a preliminary step in looking at the efficacy of operating summer educational programmes for dependent and sensory multihandicapped children and pupils in Alberta. Included in this report information gathered from a formal literature review, an examination of expert testimony in several relevant American legal cases, plus a survey of existing programmes within the province and elsewhere in Canada.

The formal literature review provided inconclusive results. Few Canadian or American studies evaluating such programmes were found. There does exist an extensive body of informal anecdoctal data. The lack of a substantive body of empirical research makes the justification of summer programmes difficult.

Questions such as whether students lose skills over the summer, whether summer programmes help students acquire skills or maintain skills already learned remain unanswered by the literature. Variables such as length of programme, objectives of programmes, expertise of staff and types of children being served make comparisons across programmes even more difficult.

Expert testimony offered in several American legal cases restates the lack of empirical studies either supporting or contradicting the general opinion of educators that substantial interruptions in educational programme cause some of these children to suffer significant loss of skills. There was agreement that each handicapped child has unique needs and will respond in his or her own way to a given situation.

Over 550 sensory and dependent multihandicapped students attended programmes during the summer of 1983 in Alberta. Most of these programmes were financed through Alberta Recreation and Parks and therefore had a recreation focus. Educational goals were secondary.

A survey of the other provinces suggests Alberta as one of the few provinces to try to deal with the issue of summer programmes for sensory and dependent multihandicapped. Saskatchewan considered such programmes but

decided such programmes worked against the integration of sensory and dependent multihandicapped students into the community. Ontario and British Columbia have procedures whereby school boards may use educational funding for summer programmes for severely handicapped children. In Manitoba, school boards provide summer programmes for blind multihandicapped children. As well, using a quite different approach, Manitoba makes available to parents of deaf-blind children funds to hire an intervenor to work with their children for eight weeks during the summer.

It becomes clear the issue is complex and that there exists, at present, no evidence that conclusively spells out the role and educational value of summer programmes for dependent and sensory multihandicapped students.

It is recommended that Alberta Education fund the Elves Memorial Child Development Centre for the summer 1983 programme, and that Alberta Education mount a substantial research project through the Planning and Evaluation Division to evaluate the impact of summer programming on dependent and sensory multihandicapped children and pupils in a number of selected programmes throughout Alberta.

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ABSTRACT

The purpose of this review was to gather information that would help clarify important issues regarding summer programming for dependent and sensory multihandicapped students. The issues examined were:

a) the loss of skills or regression over the summer months,

b) the recovery rate of skills and

c) the effectiveness of various types of summer programmes.

The task was accomplished through a review of research findings, expert testimony from legal cases in the United States and a survey of existing programmes within the province and elsewhere in Canada. The research literature provided no Canadian findings; in fact, there were few pertinent studies. Of these few, most are informal in nature and lack rigour. In general, the existing studies and expert testimony offered in Armstrong vs Kline and Battle vs Commonwealth would seem to suggest summer programmes as necessary.

In a survey of summer programmes operated in Alberta in 1982, Alberta Recreation and Parks sponsored, as is its mandate, 39 programmes. Alberta Education sponsored two for sensory multihandicapped children through the C.A.P.E. program, and one was co-sponsored with Alberta Social Services and Community Health (Elves Memorial Child Development Centre Program). Information concerning the number of students and the nature of the programmes are included along with, where possible, a full final report.

The conclusion was that a formal research study should be undertaken to more fully explain the issues of skill loss, skill recovery and programme effectiveness with regards to summer programmes for dependent and sensory multihandicapped within the province. Such a study should be undertaken under the auspices of Alberta Education, Planning and Evaluation Division.

Foreword

Interest was shown by the Elves Memorial Child Development Centre in providing a modified programme during July and August 1982. The experimental summer programme was subsidized by the Minister of Education to the extent of $30,000. The Minister requested that a literature search be carried out to see whether twelve month programming and funding is justified. This review of the literature has been undertaken to bring together as much information as possible to address this issue.

The information in this review is as accurate as it has been possible to ascertain. There may be programmes which have not come to our attention.

SOME QUERIES AND QUESTIONS

Inherent in the issue of summer programming for severe and dependent multihandicapped children are a variety of informal questions.

To establish the need for such programmes a careful examination of regression and recovery - whether skills are lost and the time factor involved in regaining them - is required.

Questions might run something like this: Firstly and simply, is there a loss of skill, a regression over the summer months? What is the nature of the regression? Does it vary with the nature of the handicap? Do non-handicapped children regress? What part does the multihandicapped individual's involvement or lack of involvement in a summer programme have to play in such a regression? How is regression measured? What about recovery? How much time is required for recovery? Do summer programmes make a recovery period unnecessary? What is the nature of the impact of summer programmes on recovery time?

Also important here, are questions concerning programme effectiveness. Of course, programme effectiveness is usually measured by examining how the programme meets its set objectives. Still, what type of programming would be most useful or effective for these children? What type of programmes have been effective? How was effectiveness measured? What is the most effective length of time for such a programme? What are the best staffing arrangements?

Out of all of the above comes some more formal questions:

1) does a continuous programme make a significant difference to the multihandicapped?
2) do such students regress during the summer months when programmes shut down?
3) what type of evaluation is being used to establish the answers to these questions?
4) what are the objectives of existing summer programmes for such children?

i) Definitions of Disabilities

Sensory Multihandicapped - students whose visual and/or hearing impairment may be accompanied by other handicapping conditions to the extent that the student requires specialized services usually unavailable in programmes for handicapped children without visual and/or hearing impairment or in programmes designed for children with visual or hearing impairment only.*

Dependent Multihandicapped - students who because of the intensity of a combination of physical, mental and/or emotional problems are unable to function without reliance on someone else to care for their own needs.

ii) Various Approaches to Summer Programmes

There have been a variety of approaches to the issue of summer programming for the severe and the multihandicapped. The five types of programmes most frequently found are:

(1) Summer programmes: programmes taking place from 2 to 6 weeks during the summer months.

(2) Extended Year Programmes: programmes taking place during the summer implementing the same objectives as the programme already in place during the school year.

(3) Continuous Schooling: programmes which are ongoing and encompass the whole year.

(4) Recreational Programmes: Programmes with a largely recreational intention.

(5) Educational Programmes: programmes with a largely educational intention.

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*See Sensory Multihandicapped Programme Planning Project, Alberta Education, Planning and Research Branch, October, 1979, page 7.

REVIEW

Four approaches have been taken to ascertain pertinent information which would clarify issues integral to summer programming for sensory and multihandicapped students

(a) a formal search of research literature - in particular through Educational Research in Canada, Exceptional Child Educational Research, Psychological Abstracts, Social Sciences Citation Index and Canadian Publishers Index

(b) an examination of the issue as dealt with in the expert testimony used in the United States Federal Court cases Armstrong vs Kline and Battle vs Commonwealth.

(c) an informal survey of existing programmes within the province

(d) an informal survey of existing programmes elsewhere in Canada

Formal Literature Review

Extending the school year for handicapped students has been advocated in order to:

(a) prevent their loss of skills during the summer months

(b) maintain their skills

(c) accelerate their acquisition of new skills

(d) provide them with recreational opportunities and as well

(e) provide a respite for parents.

Although these reasons have high face validity, there has been little research evidence presented to document them; even less evidence is available concerning the effectiveness of these procedures. If this lack is true of research focused on summer programmes for the handicapped in general, it is no less true for select populations such as the sensory and multihandicapped. At this time the lack of a substantive body of empirical research makes the justification of summer programmes, extended school year programmes, difficult.

Loss of Skills

It is almost an article of faith that during the summer some students -

and particularly the more severely handicapped - lose many of the skills they acquired during the regular school year and even worse, they take an inordinate amount of time to recover or recoup those skills when school resumes each fall. Teachers commonly complain that students regress during summer months, reporting that those who were performing well on specific tasks in May and June have lost many of these skills by September when they return to school. Such anecdotal reports indicate that as the severity of the handicap increases the degree of skill loss increases.

There is the added argument that if the first few months of each new school year are used to review old skills, students will acquire fewer new skills each year. Unfortunately, data in the research literature to document this claim are virtually non-existent. There are no data to indicate how much the students regress or how much instructional time is required before they regain these lost skills. If, for example, lost skills were regained in 2 or 3 weeks time, extending the school year or implementing summer programmes to prevent loss in student skills would be an inefficient use of resources and would be hard to justify. Maintenance activities can only be considered valid when student skill losses are documented to be severe.

Maintenance of Skills

In one of the few evaluative studies focused on skill level, Ellis (1975)[a] found that of 16 severely multihandicapped blind children involved in a summer programme no child decreased in skill levels in the following areas: communication skills, vision training, psychomotor and perceptual training, social development, ambulation, self dependence, self awareness and awareness of others. In a supportive and similar study with 145 neurologically and physically handicapped students Ellis (1975)[b] found a statistically significant improvement of participants in programme skill areas. This research would seem to suggest that summer programmes are valuable efforts in maintaining skill levels. In contrast, Edgar, Spence & Kenowitz (1977) critically analysed 18 extended school year programmes in the State of Washington.

Of these programmes, eight set maintenance of skills as a primary objective. Student evaluations included teacher observations of specific child performance, rating scales and standardized tests. From the analyzed data there was some evidence that multihandicapped children fail to maintain skills during summer months even with instruction. Some explanations for such a finding may be found in a paper by Larsen, Goodman & Glean (1981). They suggest that

> skill maintenance cannot be achieved unless there is a continuity between the objectives of the educational programmes provided for and the instructional methods used with each student during the preceding school year, the summer programme, and the subsequent school year...provisions should be made for the summer school staff members to become acquainted with each student's programme and instructional procedures prior to the end of the school year. (p. 258)

Acquisition of New Skills

Obviously, sensory and multihandicapped students acquire skills at a slower rate than do the non-handicapped or less severely handicapped. The argument is generally put forward that such students need summer programming as additional opportunities to acquire new skill. Since there exists little data which systematically analyzes such students' performance levels, there is little to indicate the amount of gain students do in fact make during summer programmes. Again there are informal anecdotal reports but little formal research (Allward et al., 1975). No known research clearly indicates that the newly acquired skills are evident at the beginning of the subsequent school year or that students who acquire additional or new skills during the summer show increased learning during the subsequent school year (Edgar, Spence & Kenowitz; 1977).

A Final Statement on Skills

No studies presented data showing the students' performance level at the end of the previous school year. Thus, it is impossible to judge whether student gains represented the acquisition of new behaviours. As well, no data were reported on student performance during the subsequent school year. Hence, it cannot be ascertained whether summer programmes had any effect on student performance in the subsequent academic year.

An important consideration is not whether students maintain skill levels during the summer months or even until the beginning of the next school year but whether or not these students evidence skill gains over their peers who did not participate in an extended year programme at the end of the subsequent school year (Edgar, Spence, Kenowitz; 1977, p 445).

Recreational Opportunities

The severely handicapped need special recreational activities. Some summer programmes are developed to provide summer recreational opportunities (Edgar, Spence & Kenowitz; 1977). The problem, here, is in differentiating the concerns of education and recreation as well as recognizing the overlap. Issues such as the kind of skills most desirable/important for students to acquire and the kinds of programming considered essential are critical.

In one of the few empirical studies to examine a recreational summer programme, Wolpert, Leuchter and Schmidt; (1976) report that most of the 20 multihandicapped pre-schoolers benefited from the six week programme. One of the major goals of the programme was to improve the functional independence of each child (p. 300). Improvement in functional independence was measured by the Functional Skills Profile, a non-standardized assessment battery used to quantify performance changes in low-functioning developmentally handicapped persons and most of the subjects evidenced improvement.

Parental Respite

Though the literature does not speak to this issue at all, parental respite must remain a central and implicit concern if only for ethical reasons.

Origin of Research

It should be noted that all the research presented in this review originated in the United States of America. Little or no formal Canadian research was found.

EXPERT TESTIMONY

B. The Legal Basis for Extending the School Year in the United States

Stotland and Leonard (1981) clearly state the legal basis for extending the school year and this will not be repeated here. Suffice to say the intent of the United States courts in Armstrong vs Kline (1979) and Battle vs Commonwealth (1980) has been to insure an appropriate and individually designed programme of instruction for each child.

The expert testimony offered in these cases is seen as pertinent to the present review especially on the question of regression and recovery. The expert witnesses agreed that it is the general opinion of educators and other professionals that substantial interruptions in educational programming cause some of these children to suffer significant loss of skills. Nonetheless, the experts recognize that there is no known statistical study supporting or contradicting this opinion. They also acknowledge that non-handicapped children may experience loss of skills over similiar breaks in schooling.

Regression

The court concluded from the experts' testimony concerning the class and named plaintiffs that as a result of programming interruptions some multi-handicapped children lose a large amount of skills and development, even when their parents make reasonable efforts to help them maintain the progress made in school. The evidence is clear that, at least in part, the regression is caused by the absence of programming during the summer break.

Expert testimony for the plaintiffs was given by Associate Professor and Chairperson of the Department of Special Education at Temple University with a Ph.D. in Special Education, Dr. Terrence J. Piper; by Dr. John R. Kleiser*, Director of Clinical Services at the Woods School; by Dr. Marvin Rosen*, Assistant to the President of Elwyn Institute and by Christine Sadjian-Peacock, a teacher of severely handicapped children. All of these agreed that there was a loss of skills. The defendants' claim was that any regression experienced is not due to the break itself and is coincidential. They account for the regression by the non-functionality of skills being taught, the lack of teacher competency and parental failure to properly practice to the children skills that have been taught in school.

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*these men held doctorates in psychology from University of Pennsylvania and had experience with severely handicapped children.

The court did not accept their theory. The plaintiffs' evidence indicates that when students who regress during breaks receive programming, they generally do not lose skills even if they are taught what the defendant's experts consider non-functional skills by what these experts deemed not competent teachers and are not provided with a maintenance programme by their parents. However, these and other factors may, in actuality contribute to regression. Lack of functionality of skills, teacher incompetency and parental failure to maintain their children's skills when they have both the time and the ability to do so may cause regression in certain instances, so these factors ought not to be dismissed.

Recovery

Since there were no statistical studies to guide the Court on the question of how long it takes these children to relearn or regain what they have lost, the Court had to make a decision based upon expert testimony.

Based upon experts' opinions, the Court found that the rate of relearning for all types of children differs from child to child. Undoubtedly, the rate of relearning is affected by a number of factors including those that were found to affect learning, as well as the amount and type of regression the child experiences and the length of time without programming. The evidence suggests that normal children regress less and recoup their losses at a faster rate. Severely handicapped children may take months to return to their pre-summer level of skills whereas a nonhandicapped child may take a few weeks, almost never more than a month.

The strong opposition voiced by defendant's experts to an educational programme in excess of 180 days was partially based upon their belief that handicapped children, because of their inability to easily generalize, need time to function in their natural environment; they need the opportunity to employ what they have learned from their formal education in a more informal context that is likely to approximate their reality upon leaving school. The plaintiffs' experts claim that an education in excess of 180 days does not mean that these children are denied that opportunity.

Summary on Issue of Regression and Recovery

Neither regression over breaks in programming nor long periods of time to regain lost skills are a certainty for severely handicapped children. Nevertheless, some of these children will experience both. The experts in this case disagreed on many areas but uniformly agreed that each handicapped child has unique needs and will respond in his or her own way to a given situation. Decisions then must be made on an individual basis, by those familiar with the child.

CURRENT STATUS OF SUMMER PROGRAMMES

Prior to April 1982, summer programmes for sensory and multihandicapped students were part of the mandate of Alberta Social Services and Community Health. As of April 1982, the responsibility, mandate and funding lies mainly with Alberta Recreation and Parks: that is, the department is prepared, on an ongoing basis, to fund community based summer programmes for the severely and multihandicapped child. Consistent with the contract between Alberta Education and Edmonton Public School Board for the education of severely multihandicapped students, Alberta Education sponsored two programmes through Comphrensive Assessment and Programme Planning for Education (C.A.P.E.). As well, the Minister of Education provided funding along with Alberta Social Services and Community Health through Alberta Recreation and Parks to a programme at Elves Memorial Child Development Centre during the summer 1982. Alberta Education is now in the process of assessing its ongoing involvement in this area.

Summer Programmes Funded by Alberta Recreation and Parks in 1982

A specific philosophical approach was given by Alberta Recreation and Parks to guide the programmes:

(a) Disabled children should be given the same opportunity to participate in recreation programs as their "normal" peers.

(b) Disabled children should have the same opportunity for "play" as their "normal" peers, as play is vital to the total development of the child.

(c) Recreation programs for disabled need to be developed on a continuum with totally segregated programs being on one end of the spectrum and integration being on the other end. Therefore, program development needs to consider the individual needs of each child and plan programs along the full range of the continuum.

As can be seen, integration was a key concern. The programme was available only to municipal recreation authorities. Incorporated/registered community agencies might be considered as a programme provider if supported and endorsed by the local recreation authority. The costs covered were some of the staffing costs, not equipment, materials, publicity, administration or transportation costs.

For the sake of this report, it is important to note the definition for Multiple to Dependent Disability used in this programme:

a. little ability to help themselves;
b. limited or no awareness of themselves or others;
c. limited or no communication skills;
d. limited ability to get from place to place;
e. require regular medical support;
f. require ongoing assistance and support;
f. limited or no ability to respond to or perform simple requests.

The ratio used was one staff for 2 children. The programmes run in 1982 varied in educational content. All activities were to be of a recreational or play nature though a secondary therapeutic or educational purpose for the activity might also exist. For example: if it was important that the child learn left from right, up from down, holding his head up...these were incorporated into play activities.

Mr. Terry Keyko, Consultant, Special Recreation Services Section, Alberta Recreation and Parks, suggested in a recent discussion that recreation could be used as a means to reach some educational objectives. Non-handicapped children use the summer to learn skills in areas other than those usually developed in a classroom setting. He felt it important that this opportunity should also exist for the handicapped. This idea is further explored in Participation: Expanding Community and Leisure Experiences for People with Severe Handicaps (Lord, 1981). Guidelines for 1983-1984 are now available and are much more explicit in their promotion of integration and "normalization" (Wolfensberger, 1972).

(a) Program must be intended for persons with disabilities under the age of 18.

(b) Programs must be based on the principles of recreation and play. Recreation/Play must be the priority for all programs funded by this grant.

(c) Programs should provide some opportunity for either physical and/or social interaction between disabled and non-disabled children.

(d) Programs should, if possible, be located in community-based recreation facilities such as neighbourhood playgrounds, community schools and their adjacent facilities, parks, community centres, etc.

(e) Program activities must be appropriate to the ages and interests of the participants and should allow the opportunity for participation based on ability.

(f) Programs designed exclusively for children with disabilities are eligible for funding under this grant. However, justification and supporting evidence must be provided to indicate why this approach has been chosen and what consideration is being given to the integration of these individuals into regular, ongoing programs.

(g) Mildly and moderately disabled children should be integrated into existing summer programs with their non-disabled peers. If they are not being integrated, support information must be provided to justify this approach.

(h) Information must be provided on how the number of disabled participants has been arrived at.

(i) If programs are not being operated by the municipal/recreation authority, it is required that information be provided on what role the municipal/recreation authority will have in the program. (eg. financial assistance, leadership training, evaluation, administration, program planning).

It should be pointed out that a full and more thorough report will be issued by Recreation and Parks in June 1983 reviewing all the programmes of 1981-1982.

Types of Programmes Funded

Four types of summer programming were funded:

Playgrounds - traditionally located on neighbourhood playgrounds with activities largely based on site.

Summer Fun - centrally located in neighbourhoods or communities with activities being a balance of on and off site.

Day Camps - generally located in park-like settings, offering day long programs with focus on the outdoors.

Residential Camps - located at a variety of facilities, usually between one to two weeks in duration and with a specialized component (e.g. sport, outdoor education, culture, etcetera).

Funding Sources

Funding for the summer programmes often came from variety of sources, one of which, was Alberta Recreation and Parks. A look at Appendix i will show that a number of agencies, associations and government departments on a local provincial and federal level acted as possible sources. Not in all cases, but often, local associations contributed. The federal Department of Employment and Immigration also was supportive in several instances.

TABLE 1

Summer Programmes sponsored by Alberta Recreation and Parks

i) number of Students
ii) age or Students
iii) length of programme

PROGRAMMS	5 & under	6-7	8-9	10-11	12-13	14-16	16 & over	Length in weeks
1. Grande Prairie Peace District Soc.		2	2	3				6
2. Fort McMurray Y.M.C.A.				1				8, 2p*
3. St. Albert		2						5
4. Smokey River				1	2	2	2	10
5. Lethbridge City	2	4						9
6. Old Man River (Leth.)	1	2	3	3	2	2	1	9
7. Nicholes Sheran Construction Co.: Making Summer Fun Grant (Lethbridge)	1	6						2W, 3P*
8. Alberta Association for the Dependent Handicapped (S.P.) Edmonton	7	2	5	5	2	3	1	N/A**
9. Spruce Grove	4	1						7½
SUBTOTALS	15	19	10	13	6	7	4	

TABLE 1 (cont'd)

PROGRAMMS	5 & Under	6-7	8-9	10-11	12-13	14-16	16 & over	Length in weeks
10. Town of Airdrie	1		1					2
11. Hinton	3	1	1	1	1			8
12. Vermilion			1			2		
13. County of Strathcona Robin Hood				1		8	33	8
14. Lacombe					1		1	6½
15. Ponoka	2							12
16. Banff					1			8
17. Slave Lake	1							N/A**
18. Barrhead	2	2		1	4	3	4	18
19. Lac La Biche		1	1					8
20. Crowsnest Pass				1	1			8
21. Drumheller				1		1	1	8
22. Medicine Hat Pre-School	4							8
23. Medicine Hat		1		1				7
SUBTOTALS	13	5	4	6	8	14	39	

TABLE 1 (cont'd)

PROGRAMMES	5 & under	6-7	8-9	10-11	12-13	14-16	16 & over	Length in weeks
24. County of Wetaskiwin		1	1					10
25. Camp He Ho Ha		7	8	3	6	10		8
26. Glenrose	1	2						7
27. CNIB, Edmonton	4	4	1	2				8
28. Magrath		3			1	2	5	8
29. Pincher Creek (a)	2							6
30. Pincher Creek (b)	1							8
31. Viking	2	1						14
32. Camp Horizon			10	10	10	10	35	10
33. Wetaskiwin		3	1	2	14			8
34. Innisfail	1					1		7
35. Provost			1					7
36. Sherwood Park CNIB			1		1			8
37. City of Calgary Play Skills	31	6	13	16	13	19	17	8 plus 1 week orientation
SUBTOTALS	42	27	36	33	45	42	57	

TABLE 1 (cont'd)

PROGRAMMES	5 & Under	6-7	8-9	10-11	12-13	14-16	16 & over	Length in weeks
38. Taber						2	3	8
39. Southern Alberta Community Living Association (Leth.)	4	2		2		1	3	N/A**
TOTALS	74	53	50	54	59	66	106	

* Number of programmes operated
** Information not available

GRAND TOTAL 462

Summer Programmes Funded by Alberta Education and Administered by C.A.P.E. in 1982

(a) Summer Intervention Programme at Elmwood School, Edmonton for Sensory Multi-handicapped Students.

This was a collaborative endeavour by the Edmonton Public School District and the Alberta Association for the Dependent Handicapped in co-ordination with the University of Alberta Multiple Dependent Handicapped Programme. Summer intervention services were provided for students between the ages of 2.5 and 18 years.

The programme was designed to provide comprehensive educational programming to sensory multi-handicapped students which presented the most significant behavioural problems which interferred with the acquisition of new appropriate educational skills and positive social behaviours. Goals of the programme were:

1. to provide comprehensive educational programming;
2. to decrease or eliminate significant behavioural problems;
3. to complete comprehensive assessment and program planning for these students;
4. to develop functional procedures to manage the development, delivery and follow-up of services to these students; and,
5. to field test Summer Intervention Program procedures.

There were 18 students involved in a six-week programme. Comprehensive educational assessments were conducted prior to the programme and baseline measure of the problem behaviours had been established. From these, behavioural and educational objectives were formulated for each student and individualized programming developed. The report states the results of this programme are:

> ...There was educational gain in 83% of all educational objectives identified, and 94% of all behavioural objectives designed to decrease inappropriate social behaviour interferring with learning...

A more complete report from this programme is to be found in Appendix ii.

(b) Summer Intervention Programme for the Hearing and Visually Impaired in Northern Alberta

This was a collaborative endeavour by Edmonton Public School District and the Canadian National Institute for the Blind. Summer intervention services were provided for 6 children between the ages of 6 and 15 years.

The general programme goals were as following:

1. To prevent regression of acquired skills;
2. To aid in the development of socialization and recreational skills;
3. To facilitate communication between child and family and in general, to improve communication skills;
4. To provide a degree of parent relief, and
5. To improve upon the child's awareness of his or her environment through community involvement.

Individual goals for each child were pre-arranged by the educational facility that the child was attending and by parents. The programme was strictly home based with a one to one ratio of staff to students. Some important conclusions regarding programme design are contained in the final report (See Appendix ii for full report):

1. The summer program should not be a home based program.
2. The program should be a combination of an educational and recreational program.
3. The program could possibly take place in a school setting for a portion of the week with recreational activities occurring during the remaining time.
4. By part of the program occuring in a structured school setting, the intervenors would have adequate educational resources.
5. Support services such as speech pathology, occupational therapy, audiological services, etc., should be available to the intervenor.
6. The inservice should be restructured to meet the needs of the intervenors and the needs of the children directly involved in the program.
7. The intervenors should have some exposure to the child and the existing school setting before the summer program begins.
8. The method of data collection and report writing should be streamlined to both meet the goals and objectives of the program and to alleviate the workload of the intervenor.
9. The amount of time spent with each child on a daily basis should be reduced.
10. Goals and objectives should be written collectively by the parents, intervenor, and educational staff so that they are realistic and so the intervenor is aware of the demands of the job.
11. The summer program should be under the direction of only one agency.

Summer Programmes Funded by Alberta Education and Administered through Elves Memorial Child Development Centre in 1982

As stated earlier, the funding for the 1982 programme at Elves Memorial Child Development Centre was provided in part by Alberta Education and in part by Alberta Social Services and Community Health. This programme was not considered a summer programme per se; rather it was set up as an extension of the school year programme with the same clientele. Cognitive and motor training were provided for 76 severely handicapped children between the ages of 2 and 16 for 8 weeks. The programme did offer more community based activities and a higher emphasis on recreation than the regular school year programme. The major goals of the programme were:

(i) to maximize the development of the child
(ii) to stabilize/support the family.

TABLE 2

Summer Programmes Sponsored by Alberta Education

i) number of Students
ii) length of programme

SUMMER PROGRAMMES FUNDED BY ALBERTA EDUCATION IN 1982

Programme	# of Students	Length of Programme
Elmwood	18	6 weeks
Homebased Programme for Deaf/Blind	6	6 weeks
Elves Memorial	76	8 weeks

Other Programmes Run During Summer/1982

a) The St. Paul Association for the Mentally Retarded held a summer programme for 10 children, 2 of which were sensory and dependent multihandicapped. The focus of the programme was recreational, the major goal was that the children have a good time. The funding came from the local Association.

b) Two deaf-blind children were involved in an individualized summer programme of outings and activities through the auspices of the Citizen's Resource Centre in Lethbridge.

(v) Number of Students Involved in Summer Programmes 1982.

In summary, 462 Dependent and Sensory Multihandicapped students attended summer programmes through Alberta Recreation and Parks; 100 through programmes sponsored by Alberta Education; 4 through other programmes making a grand total of 566.

D. Summer Programmes Elsewhere in Canada

In general, few of the other provinces have dealt with the issue of summer programmes for the dependent and sensory multihandicapped students. Saskatchewan considered the issue and made a specific decision not to promote such programmes. The reasoning was that such programmes worked against the principle of integration. Summer programmes were seen to isolate these children for special attention and did not promote their acceptance into the normal life of the community. British Columbia and Ontario also have some rulings in place concerning such programmes but in neither province are the programmes well established. In British Columbia, school boards may receive some funding for summer programmes for severely handicapped children. Such summer programmes are considered part of regular programming. Present budget restraints have, of course, caused cut backs. Similarly, Ontario school boards may receive a higher level of funding if they provide Summer programmes for some handicapped students. Manitoba provides the parents of deaf-blind children with $3000 for an intervenor to work for 8 weeks under the direction of the parents. Students are hired under the Summer Temporary Employment Programme by school boards to provide summer programmes for blind multihandicapped children. Manitoba does not provide funds for summer programmes to private agencies.

ADDITIONAL CONSIDERATIONS

Programme Evaluation

Summer programmes (Canadian or American) that have been conducted in the past years for multihandicapped students have rarely been evaluated with precision (Larsen, Goodman, Glean; 1981). A careful evaluation must attempt to deal with such critical variables as the following:

(a) Types of handicapped students: The issue here is one of learner characteristics. The question is for whom exactly is the programme intended... which exact type of student will benefit.

(b) Length of programmes: One clear inconsistency evident in both the literature and information gathered informally within Alberta is the varied length of programmes. From the data available it is impossible to determine the crucial amount of instructional time needed to either maintain or increase a student's skills.

(c) Instructional Staff: The quality of instructional staff varied tremendously across projects.

(d) Measurement Procedures: In the existing research literature there was no common and consistent method of evaluating student progress.

(e) Temporal Measurement: The effectiveness of extended school year programmes depends on the collection of information on the student skill levels

i) at the end of the regular school year
ii) at the end of the summer programme
iii) at the beginning of the subsequent school year, and
iv) at the end of the subsequent school year.

If the data at this last point fails to indicate gains, the entire concept is faulty (Edgar, Spence & Kenowitz; 1977 p. 24-25). This last point is considered a critical variable.

Reducing Need for Extended Year Programme

Larsen, Goodman and Glean (1981) make three interesting suggestions about reducing the need for extended year programmes and the promotion of skill maintenance. Their suggestions are as follows:

(a) an emphasis on functional skills useful to students in their natural environment, skills intrinsically reinforced in that environment, in programming, in general.

(b) skill maintenance activities as an integral part of the skill acquisition programme during the regular school year.

(c) active involvement of parents in maintenance activities as a part of their daily routine.

Of these suggestions, the second seems most important to keep in mind to reduce the need for extended year programmes. Even with such efforts, some children will undoubtedly require such programmes. It might be suggested that extended year programmes become even more essential when the school year programme is centered on behavioral management techniques.

Final Comments

The research literature is inconclusive in its support of summer programmes for dependent and sensory multihandicapped students. Few American or Canadian programmes have undergone formal evaluation and of those that have, variables such as kinds of children served, length of programme, objectives of the programme and expertise of staff have been neglected.

The summer of 1982 saw over 550 dependent and sensory multihandicapped students involved in summer programmes in Alberta.

The majority of these students were in programmes sponsored by Alberta Recreation and Parks. The focus of these programmes was integration of the child into the community. A question of how educational needs can best be met must not be overlooked. A systematic solution is required. Some suggestions which might be part of such a solution include the following:

1. That there be agreement and co-operation regarding the objectives for summer programmes for the severely multihandicapped among the various governmental agencies involved.
2. That there be a formal study of the questions of regression, recovery and effectiveness as outlined in the introduction of this report.
3. That this study take into account as many of the suggestions gathered from the literature as practically feasible.
4. That such a study attempt to look at a variety of summer programmes within the province...both ones intended for summer and ones functionning on a continuous basis as well as those with either a recreational or educational focus.
5. That as a step in such a study there be on-site observation of selected existing summer programmes within the province.
6. That the results of such a study act as a factor in future decisions in the area of summer programming for the severe and multihandicapped.

Recommendation for Future Action

Based on the lack of specific information as revealed in this survey, it is recommended that Alberta Education fund the Elves Memorial Child Development Centre for the summer 1983 programme and that Alberta Education mount a substantial research project through the Planning and Evaluation Division to evaluate the impact of summer programming on dependent and sensory multihandicapped children and pupils in a number of selected programmes throughout Alberta.

AN ANNOTATED BIBLIOGRAPHY

Evaluations of Summer Programmes in the Literature

- Allard, W. Gregory and Others
  "Helping Teachers Work with "Unteachable Children."
  Children Today, v4, N5, pages 15-16, September/October 1975

A summer workshop involving 24 handicapped children (including emotional and physical handicaps) ranging in age from 4 to 17 years, was designed to demonstrate the fact that severely handicapped children can be educated. Based on each child's needs, a program of half-hour individual training periods (teaching children such behaviours as sitting up or tying shoes) was developed, using the behavior task analysis model and techniques such as positive reinforcement. A largely descriptive anecdoctal article, this paper does not attempt to be empirical.

- Baken, Joan Wald
  "Inservice Teacher Training in a Summer Programme for Severely Handicapped Children: A Summer Can Make The Difference."
  Rehabilitation Literature, v37, N3, pages 74-77, March, 1976.

In three years the Easter Seal Summer Special Education Program at Teachers College, Columbia University, has provided individualized instruction and recreation programming to 40 severely and multiply handicapped children (3 - 18 years old) and inservice training to 75 teachers and 20 speech pathology students. This account is largely of a descriptive nature. As Baken says herself, the effects on teachers and children have yet to be empirically tested.

- Ellis, Ronald S.
  Summer Pre-Placement Programme for Severely Handicapped Blind Children. Summer 1975.
  Evaluation Report.
  New York City Board of Education, Brooklyn, N.Y. Office of Educational Evaluation, 1975, 27 pages.

Evaluated was the Summer Pre-Placement Programme for Severely Multihandicapped Blind Children designed to provide individualized programmes for improving the performance of 16 children (4 to 11 years old) in the following areas: Communication skills, vision training, psychomotor and perceptual training, social development, ambulation, self dependence, self awareness, and awareness of others. Findings showed no child decreased in terms of the areas under consideration.

- Ellis, Ronald S.
  Summer Education Program for Neurologically and Physically Handicapped Children. Summer 1975. Evaluation Report.
  New York City Board of Education, Brooklyn, N.Y. Office of Educational Evaluation. 1975, 35 pages.

Evaluated was the Summer Education Programme for Neurologically and Physically Handicapped Children designed to improve the performance of 145 children (6-16 years old) in the following areas...gross motor skills, swimming, fine motor skills, socialization with nonhandicapped peers, and independent living skills. Findings indicated that the programme met its objectives of demonstrating a statistically significant improvement of its participants in programme skill areas.

- Wolpert, Rhona; Leuchter, Sharon and Schmidt, Margaret.
  "Summer Day Camp for Multihandicapped Children"
  Physical Therapy, v56, n3, March/76 pages 299-304

A six-week enriched sensory motor, communication, and recreational summer day camp for 20 multihandicapped pre-school children is described. The programme planned and supervised by therapists and mental retardation counselors, provided training for students who worked as camp counselors. The improvement in the children was measured by the Funtional Skills Profile (FSP), an assessment battery designed to measure performance changes in low functioning developmentally handicapped persons. The results reported indicated positive change occurred to some degree for most individuals.

- A 1966 Summer Programme for Children with Physical, Multiple and Mental Handicaps, June 22, 1966 - August 17, 1966. Programme Evaluation Milwaukee Public Schools, Wisconsin, 1966, 39 pages.

This summer programme for handicapped children was designed to meet the special needs of these children for socialization and better use of leisure time and to provide data which would enable the Division of Municipal Recreation and Adult Education of the Milwaukee Public Schools to plan future programmes. Both the mentally handicapped children's programme (54 participants) and the programme for physically or multiply handicapped (51 participants) consisted of games, drafts, musical activities and field trips. The study used staff and parent ratings as well as student self-reports as means of programme evaluation.

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(2) Allward, W. Gregory and Others. "Helping Teachers Work with 'Unteachable' Children." *Children Today*, 1975, vol. 4(5), 15-16

(3) Armstrong vs Kline, 476 F. Supp. 583 (E.D. Pa. 1976)

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C.A.P.E. programme, November 23, 1982, 5 p. (unpublished manuscript)

(5) Barton, Lyle. "Summer Intervention Programme for Sensory Multihandicapped Students: Summary Report."
C.A.P.E. Programmer, August 23, 1982, 13 p. (unpublished manuscript)

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The Journal of Special Education, 1977, vol. II(4), 441-447

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Alberta Recreation and Parks, Recreation Services to Special Groups Section, 1982, 9 p. (unpublished manuscript)

(11) Keyko, Terry. "Guidelines for Applicants: Recreation for the Disabled Financial Assistance Programme, 1983-1984"
Alberta Recreation and Parks, Recreation Services to Special Groups Section, 1983, page 7.

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"Issues in the Implementation of Extended School Year Programmes for Handicapped Students."
Journal of Exceptional Children, 1981, vol. 47(4), 256-263

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National Institute for Mental Retardation, 1981, 75 p.

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Journal of Exceptional Children, 1981, vol. 47(4), p. 266-270.

(15) Wolfensberger, Wolf. *The Principles of Normalization in Human Services*.
Toronto: National Institute on Mental Retardation, 1972, 258 p.

(16) Wolpert, Rhona; Leuchter, Sharon; and Schmidt, Margaret.
"Summer Day Camp for Multihandicapped Children." Physical Therapy, 1976,
vol. 56(3), pages 299-304.

APPENDIX 1

SAMPLE OF FUNDING SOURCES

Funding Sources: 1) Alberta Recreation and Parks Department, Special
Recreation Services Section $96,000.00 approximately
Grant: Recreation for the Disabled - Financial
Assistance Grant
- staffing

2) Government of Canada $10,000.00 approximately.
Employment Development Branch
Grant: Summer Canada
Student Employment
Program
Staffing

3) Alberta Advanced Education and Manpower $10,000.00
approximately.
Grant: Summer Temporary Employment Program
- staffing

4) Baker Centre $10,000.00 approximately
fee for service for specialized Playskills
Program Staffing

5) City of Calgary Parks/Recreation Department
Recreation Services for the Disabled Services -
Program Co-ordinator and Administration costs
- $25,000.00 approximately
- (not a cash grant)

6) Canadian Cerebral Palsy Association
$6000.00 approximately
donation - program expenses

7) Burns Foundation - $25,000.00 approximately
donation - equipment purchases

8) Fees for service to parents:
approximately $8000.00

APPENDIX ii

REPORTS FROM SUMMER PROGRAMMES
THROUGH C.A.P.E. 1982

- Summer Intervention Programme at Elmwood School for Sensory Multihandicapped Students

- Summer Intervention Programm Provided in Co-operation with the Canadian National Insitute for the Blind

AGENDA ITEM 4.
BOARD

EDMONTON PUBLIC SCHOOLS

September 14, 1982

TO: Board of Trustees

FROM: M. A. Strembitsky, Superintendent of Schools

SUBJECT: Summer Intervention Program at Elmwood School for Sensory Multi-Handicapped Students: Summary Report

ORIGINATOR: Werner Schmidt, Associate Superintendent of Schools
Dr. Roger F. Palmer, Associate Superintendent Planning and Development Services

RESOURCE PERSON: Dr. Alex Hillyard, Program Manager C.A.P.E. Program

RECOMMENDATION

That the following report be received for information.

* * * * *

At the May 11th Board meeting, a recommendation was approved for the District to provide two Summer Intervention Programs for sensory multi-handicapped students at no cost to the Board. This report summarizes the school-based Summer Intervention Program at Elmwood School, which was a collaborative endeavour by the Edmonton Public School District and the Alberta Association for the Dependent Handicapped in co-ordination with the University of Alberta Multiple Dependent Handicapped Program. A separate report will summarize the Outreach Summer Intervention Program for Deaf-Blind Children, operated in conjunction with C.N.I.B.

The Summer Intervention Program at Elmwood School, as shown in the attached report (Appendix I), was very successful as identified by the educational gains of students and attitudes of parents/guardians and staff toward the program. Overall, success of the program can be summarized as follows:

1. There was educational gain in 83% of all educational objectives identified, and 94% of all behavioural objectives designed to decrease inappropriate social behaviour interfering with learning.

2. The parents and guardians of students attending the program (assessed through a recipient survey) indicated that the program was very beneficial for their child and they noticed an overall improvement in both educational and pro-social behaviour.

3. The staff working in the program (assessed through a staff survey) reported that the program was well organized, well co-ordinated, beneficial to all students involved, and they enjoyed their involvement in the program.

4. Individual Educational Plans were developed for each student and will be forwarded to each student's school in September.

5. The resulting individual educational plan format and inservice training approach developed in the summer program will be passed on to other teachers and developmental assistants in the District who are working with sensory multi-handicapped and dependent handicapped students.

6. The Summer Intervention Program at Elmwood School was a very positive example of how the Edmonton Public School District, a community parent group, and the University of Alberta, can collaborate together toward the design, establishment and operation of a successful intervention program for children.

AE:dgb
attachment

Appendix B

Instruments

Inappropriate Behaviors Observation Checklist

Skills Regression, Retention, Improvement Checklist

Summer Programs: General Information

Summer Programs: Interaction Observation Schedule

Summer Programs: Parent Questionnaire

Summer Programs: Staff Questionnaire

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NAME

INAPPROPRIATE BEHAVIORS CHECKLIST

	PASSIVE				ACTIVE				SELF ABU				PERSONAL					REPETITIVE					INTER		
	N. attent	N. coop.	blank	bizarre	noise	fidget	moves	temper/hv	bang	bite	strike	pull	undress	mouths	drool	grind	tongue	head	hand	limb	body	s. stim	annoy	abuse	phys.con
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	PASSIVE				ACTIVE				SELF ABU				PERSONAL					REPETITIVE					INTER		
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SUMMER PROGRAMS FOR SEVERELY HANDICAPPED: GENERAL INFORMATION at ____________ Length ______
Contact: _________ Observed on (dates)_________________________ (times)___________________

I. PROGRAM

1. Orientation (%)
---- educational
--- recreational
--- other

2. Integration
---phys.facility only
--- a few activities
--- most/all "

3. Length(#)
--- ½ day
--- full "
1,2,3,4,6,8 wk.

4. Content (%)
--- structured teaching
--- teaching thru play
--- free activities
--- field trips/camping
--- basic/self care
--- music, art, crafts
--- other(list)

5. Objectives (List briefly)

II. FACILITY

6. Location
--- school
--- rec. centre
--- outdoors

7. Appropriateness
--- wheelchair access
--- toilet facilities
--- other (list)

8. Rain Facility
--- none
--- barely adequate
--- good

9. Materials/Equipment
--- insufficient/unavailable
--- sufficient/available
--- wide range/high quality

III. STAFFING

10. Student/staff Ratio
--- for severely HC
--- for other HC
--- for non HC

11. Numbers of Staff
M F
--- --- administrat.
--- --- teachers/rec
--- --- college stud
M F
--- --- volunteers
--- --- specialists (which?)

12. Parent Involvement(#)
--- occasional visits
--- frequent visits
--- part-time helpers
--- full time helpers

IV. STUDENT PARTICIPANTS

13. Age (incl. non-HC-give #-%)
M F
--- --- 2½-4
--- --- 7-9
--- --- 13-15
M F
--- --- 5-6
--- --- 10-12
--- --- 16-18

14. Type of Student (#-%)
M F
--- --- severely HC
--- --- other HC
--- --- non HC

15. Living Accomodation-Severe HC (#)
--- own home/foster home
--- group home
--- institution (size?)

V. ACTIVITIES OBSERVED

16. Setting (%)
--- classroom
--- bathroom
--- gym
--- therapy rm
--- pool
--- outdoors
--- other

17. Type (%)
--- basic care
--- self-care
--- indiv/group play
--- music/art/crafts
--- listening
--- free,unstruct.
--- structured teaching
--- teaching thru play
--- other

18. Methods (%)
--- behav. modif.
--- verb/nv teaching
--- v/nv w.phys. assist
--- phys. assist only
--- other

19. Student Interaction Level(%)
inner directed ---------
positive responses-------
negative responses-------
initating activities ----
other (list) -----

20. Staff Interaction Level (%)
--- setting oriented
--- basic care
--- outer non-instructional
--- outer direct instructional
--- positive reinforcement
--- negative reinforcement

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JUNE TO SEPTEMBER, 1983 SKILLS REGRESSION, RETENTION, IMPROVEMENT

NAME ________ SCHOOL ________ SUMMER PROGRAM? YES_ NO__ HOW LONG? ___ WHERE? ______

Please indicate what has happened to the child's skills between June and September. If you wish to differentiate between various aspects, please do so in the space provided. INdicate when an area is not applicable, as for example, if a child cannot work in that area because of the disability, etc. Use a separate sheet for each child. Please mark your choice with X.

I. MOTOR:	NOT APPLICABLE TO THIS CHILD	MUCH LOSS OF SKILLS	SOME LOSS OF SKILLS	RETAINED SKILLS	SOME GAIN OF SKILLS	MUCH GAIN OF SKILLS	INDEPENDENT FUNCTIONING
GROSS							
FINE							
II. COGNITIVE:							
III. SELF-HELP:							
EATING							
TOILET							
DRESS							
IV. COMMUNICATION:							
RECEPTIVE							
EXPRESSIVE							
V. SOCIAL:							
INTERACTION							
CLASSROOM BEHAVIOR							

INTERACTION OBSERVATION SCHEDULE-SUMMER PROGRAMS FOR SEVERELY HANDICAPPED at

______ Centre/Town on ______ Date ______ Time

STUDENT

AGE/SEX

HANDICAP

LEVEL OF INVOLVEMENT T

INNER DIRECTED ACTIV

21. Inactive,sleep
22. Self-care
23. Self-stim

OUTER DIRECTED RESPONSES

24. Smile,laugh,cry wait,listen,watch
25. Read,play toys/others
26. Destroy t,aggressive
27. Reject,withdraw

INSTRUCTIONAL RESPONSES

28. Begin response(R)
29. Continue/complete R.
30. Stop R bef. complete
31. No R (accept manipul)
32. Resist R & manipulat

INDEPENDENT INITIATION

33. Approach,initiate,q.
34. Participate-group
35. Indepen. work/play

STAFF

SETTING

TYPE OF ACTIVITY

INSTRUCTIONAL METHOD T

SETTING ORIENTED ACTIV

36. Talk w. adults
37. Mater,food,reports
38. Basic care
39. Discuss stud present

OUTER DIRECTED ACTIVITY

40. Supervise presence
41. Read story Present material
42. Organize activ
43. Play/converse stud.

INSTRUCTIONAL ACTIVITY

44. Verb instruct/quest.
45. Non-v. " "
46. Verbal+physic.assist
47. Non-v. ± " "
48. Phys. assist only

REINFORCEMENT

49. Positive-verb/nonverb
50. Restrain/scold

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Alberta
EDUCATION

Devonian Building, West Tower, 11160 Jasper Avenue, Edmonton, Alberta, Canada T5K 0L2

1983 SUMMER PROGRAMS FOR HANDICAPPED CHILDREN SUMMER STAFF QUESTIONNAIRE

KINDLY RESPOND TO THE FOLLOWING QUESTIONS. AS A STAFF MEMBER, YOUR RESPONSES WILL BE OF GREAT VALUE IN FUTURE PROGRAM PLANNING.

Location ____________ Length of program ________ Your role in it ________________

PLEASE CIRCLE YOUR CHOICES: SD-Strongly disagree D-Disagree N-Neutral
SA-Strongly agree A-Agree

1. Summer programs for handicapped children are unnecessary. 1) SD D N A SA
2. The children's behavior has improved during the summer. 2) SD D N A SA
3. The children's skills have improved during the summer. 3) SD D N A SA
4. There was too little involvement with parents/group homes. 4) SD D N A SA
5. The program planning was not carried out early enough. 5) SD D N A SA
6. I would like to work in a summer program in the future. 6) SD D N A SA
7. This summer's program was too short. 7) SD D N A SA
8. This summer's program was well organized. 8) SD D N A SA
9. For a handicapped child, the day was too long. 9) SD D N A SA
10. For a handicapped child, the program was too demanding. 10) SD D N A SA
11. There should be more emphasis on skills and behavior. 11) SD D N A SA
12. There should be more integration with non-handicapped. 12) SD D N A SA
13. These children would have benefited as much by staying home. 13) SD D N A SA
14. I would recommend this program for other handicapped children. 14) SD D N A SA
15. Staff preparation prior to the program was inadequate. 15) SD D N A SA
16. When problems or questions arose, there was no one to help. 16) SD D N A SA
17. Too much time was spent on organizational and paper tasks. 17) SD D N A SA
18. What I liked best in the program was ________________________________
19. What I liked least in the program was ________________________________
20. Areas that created problems in the program were ________________________
21. Were the objectives of your summer program realized? _____ Explain ______________

____

PLEASE ADD ANY FURTHER COMMENTS OR SUGGESTIONS

I am: --- administrator/clerical
--- teacher
--- recreation personnel
--- college student
--- specialist __________
--- other ______________

Date ________________

Alberta
EDUCATION
Devonian Building, West Tower, 11160 Jasper Avenue, Edmonton, Alberta, Canada T5K 0L2

1983 SUMMER PROGRAMS FOR HANDICAPPED CHILDREN PARENT QUESTIONNAIRE

KINDLY RESPOND TO THE FOLLOWING QUESTIONS. AS A PARENT, YOUR RESPONSES WILL BE OF GREAT VALUE IN FUTURE PROGRAM PLANNING. EVEN IF YOUR CHILD DID NOT ATTEND A SUMMER PROGRAM, PLEASE ANSWER QUESTIONS WHICH ARE APPLICABLE.

Did your child attend a summer program? ____ Where? ______________ for how long? _______

If not, why not? ______________________________

If not, what did s/he do during the summer? ______________________________

Please CIRCLE YOUR CHOICES TO THE FOLLOWING: SD-Strongly disagree D-Disagree N-Neutral SA-Strongly agree A-Agree

1. Summer programs for handicapped children are unnecessary. 1) SD D N A SA
2. My child's behaviour has improved during the summer. 2) SD D N A SA
3. My child's skills have improved during the summer. 3) SD D N A SA
4. Friends and relatives have noticed my child's improvement. 4) SD D N A SA
5. I did not have information about the program early enough. 5) SD D N A SA
6. I want my child in a summer program in the future. 6) SD D N A SA
7. This summer's program was too short. 7) SD D N A SA
8. This summer's program was well organized. 8) SD D N A SA
9. For my child the day was too long. 9) SD D N A SA
10. For my child the program was too demanding. 10) SD D N A SA
11. There should be more emphasis on skills and behaviour. 11) SD D N A SA
12. There should be more integration with non-handicapped. 12) SD D N A SA
13. My child would have benefited as much by staying home. 13) SD D N A SA
14. I would recommend this program for other handicapped children. 14) SD D N A SA
15. The staff were competent in programming for handicapped. 15) SD D N A SA
16. When I had questions or problems, the staff were not helpful. 16) SD D N A SA
17. Too much time was spent on organizational and paper tasks. 17) SD D N A SA
18. What I liked best about the program was ______________________________
19. What I like least about the program was ______________________________
20. Areas that created problems in relation to the program were ______________________________

PLEASE FEEL FREE TO ADD ANY FURTHER COMMENTS OR SUGGESTIONS.

Date ______________

I am: --- parent/foster parent
--- group home staff
--- other ______________

BEST COPY AVAILABLE

NAME

INAPPROPRIATE BEHAVIORS CHECKLIST

	PASSIVE				ACTIVE				SELF ABU				PERSONAL					REPETITIVE					INTER			PASSIVE				ACTIVE				SELF ABU				PERSONAL					REPETITIVE					INTER		
	N. attent	N. coop.	blank	bizarre	noise	fidget	moves	temper/bv	bang	bite	strike	pull	undress	mouths	drool	grind	tongue	head	hand	limb	body	s. stim	annoy	abuse	phys. con	N. attent	N. coop.	blank	bizarre	noise	fidget	moves	temper/bv	bang	bite	strike	pull	undress	mouths	drool	grind	tongue	head	hand	limb	body	s. stim	annoy	abuse	phys. con
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JUNE TO SEPTEMBER, 1983 SKILLS REGRESSION, RETENTION, IMPROVEMENT

NAME ________ SCHOOL ________ SUMMER PROGRAM? YES NO HOW LONG? ____ WHERE? ________

Please indicate what has happened to the child's skills between June and September. If you wish to differentiate between various aspects, please do so in the space provided. INdicate when an area is not applicable, as for example, if a child cannot work in that area because of the disability, etc. Use a separate sheet for each child. Please mark your choice with X.

I. MOTOR:	NOT APPLICABLE TO THIS CHILD	MUCH LOSS OF SKILLS	SOME LOSS OF SKILLS	RETAINED SKILLS	SOME GAIN OF SKILLS	MUCH GAIN OF SKILLS	INDEPENDENT FUNCTIONING
GROSS							
FINE							
II. COGNITIVE:							
III. SELF-HELP: EATING							
TOILET							
DRESS							
IV. COMMUNICATION:							
RECEPTIVE							
EXPRESSIVE							
V. SOCIAL:							
INTERACTION							
CLASSROOM BEHAVIOR							

SUMMER PROGRAMS FOR SEVERELY HANDICAPPED: GENERAL INFORMATION at ____________ Length ______

Contact: _________ Observed on (dates)______________________ (times)________________

I. PROGRAM

1. Orientation (%)
---- educational
--- recreational
--- other

2. Integration
---phys.facility only
--- a few activities
--- most/all "

3. Length(#)
--- ½ day
--- full "
1,2,3,4,6,8 wk.

4. Content (%)
--- structured teaching
--- teaching thru play
--- free activities
--- field trips/camping
--- basic/self care
--- music, art, crafts
--- other(list)

5. Objectives (List briefly)

II. FACILITY

6. Location
--- school
--- rec. centre
--- outdoors

7. Appropriateness
--- wheelchair access
--- toilet facilities
--- other (list)

8. Rain Facility
--- none
--- barely adequate
--- good

9. Materials/Equipment
--- insufficient/unavailable
--- sufficient/available
--- wide range/high quality

III. STAFFING

10. Student/staff Ratio
--- for severely HC
--- for other HC
--- for non HC

11. Numbers of Staff
M F
--- --- administrat.
--- --- teachers/rec
--- --- college stud
M F
--- --- volunteers
--- --- specialists (which?)

12. Parent Involvement(#)
--- occasional visits
--- frequent visits
--- part-time helpers
--- full time helpers

IV. STUDENT PARTICIPANTS

13. Age (incl. non-HC-give #-%)
M F
--- --- 2½-4
--- --- 7-9
--- --- 13-15
M F
--- --- 5-6
--- --- 10-12
--- --- 16-18

14. Type of Student (#-%)
M F
--- --- severely HC
--- --- other HC
--- --- non HC

15. Living Accomodation-Severe HC (#)
--- own home/foster home
--- group home
--- institution (size?)

V. ACTIVITIES OBSERVED

16. Setting (%)
--- classroom
--- bathroom
--- gym
--- therapy rm
--- pool
--- outdoors
--- other

17. Type (%)
--- basic care
--- self-care
--- indiv/group play
--- music/art/crafts
--- listening
--- free,unstruct.
--- structured teaching
--- teaching thru play
--- other

18. Methods (%)
--- behav. modif.
--- verb/nv teaching
--- v/nv w.phys. assist
--- phys. assist only
--- other

19. Student Interaction Level(%)
inner directed --------
positive responses-------
negative responses-------
initating activities ----
other (list) -----

20. Staff Interaction Level (%)
--- setting oriented
--- basic care
--- outer non-instructional
--- outer direct instructional
--- positive reinforcement
--- negative reinforcement

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INTERACTION OBSERVATION SCHEDULE-SUMMER PROGRAMS FOR SEVERELY HANDICAPPED at ____________ on ____________

Centre/Town Date Time

STUDENT ( )		( ) STAFF	
AGE/SEX		SETTING	
HANDICAP		TYPE OF ACTIVITY	
LEVEL OF INVOLVEMENT	T	INSTRUCTIONAL METHOD	T
INNER DIRECTED ACTIV		SETTING ORIENTED ACTIV	
21. Inactive, sleep		36. Talk w. adults	
22. Self-care		37. Mater, food, reports	
23. Self-stim		38. Basic care	
OUTER DIRECTED RESPONSES		39. Discuss stud present	
24. Smile, laugh, cry Wait, listen; watch		OUTER DIRECTED ACTIVITY	
25. Read, play toys/others		40. Supervise presence	
26. Destroy t, aggressive		41. Read story Present material	
27. Reject withdraw		42. Organize activ	
INSTRUCTIONAL RESPONSES		43. Play/converse stud.	
28. Begin response (R)		INSTRUCTIONAL ACTIVITY	
29. Continue/complete R.		44. Verb instruct/quest.	
30. Stop R bef. complete		45. Non-v. " "	
31. No R (accept manipul)		46. Verbal+physic. assist	
32. Resist R & manipulat		47. Non-v ± " "	
INDEPENDENT INITIATION		48. Phys. assist only	
33. Approach, initiate, q.		REINFORCEMENT	
34. Participate-group		49. Positive-verb/nonverb	
35. Indepen. work/play		50. Restrain/scold	

Appendix C

Correspondence

To school jurisdictions
To parents

Alberta
EDUCATION

Devonian Building, West Tower, 11160 Jasper Avenue, Edmonton, Alberta, Canada T5K 0L2

May 18, 1983

Dr. H. Treleaven
Superintendent of Schools
County of Barrhead #11
P.O. Box 820
BARRHEAD, Alberta
TOC OEO

Dear Dr. Treleaven:

Summer Programs for the Handicapped

Please consider this request for assistance to Alberta Education in conducting an evaluation of summer programs for severely and dependent handicapped children and youth. We also seek permission to observe and test selected groups of handicapped pupils in classrooms during the spring and fall of 1983.

The purpose of the program evaluation is to provide information to government to assist in developing policies and procedures with respect to summer programs for the handicapped. The manner in which this information will be gathered is outlined in general terms on the attachment. Dr. Louise Zdunich has contracted to undertake the tasks outlined on the attached. Dr. Zdunich will be assisted by two university students--Miss Peggy Lavoureux (Calgary and Lethbridge) and Mr. Gordon Marchiori (Edmonton and vicinity).

Selection of students to be observed and collection of baseline information will take place during May and June. We understand that parental permission for this activity and for later observations may be required. It would be helpful if school personnel would secure the required permission on behalf of Alberta Education. If this is not convenient we can undertake the task if names and addresses are provided.

Will you please indicate the following: 1) permission to conduct the evaluation in your school jurisdiction, 2) the contact persons and their phone numbers re: September-June programs and 3) the contact persons (or the agencies and their phone numbers) responsible for summer programs in your area.

Thank you for considering these requests.

Yours truly

H. C. Rhodes
Education Consultant
Planning Services Branch
Phone: 427-8216

[redacted]
8924 - 85 Avenue
Edmonton, Alberta
T6C 1HI
Phone: 469-5321

Dr. Heleen McLeod
Special Education Services Branch

Attachments

EDUCATION

Devonian Building, West Tower, 11160 Jasper Avenue, Edmonton, Alberta, Canada T5K 0L2

May, 1983

Dear Parent:

Re: Evaluation of Summer Programs for the Handicapped

The Department of Education of the provincial government is conducting an evaluation of summer programs for handicapped children and youth. In order to complete the provincial evaluation and describe the program, we need to observe the children in the school and summer environments. We ask your permission to observe your child at school during the regular school year and then again in the summer if the pupil is placed in a summer program. If the child is not enrolled in a summer program, we would like to visit you at home to meet with you so that we can describe the child's summer activities.

All information collected will remain confidential. Students and parents will not be identified by name in any of the reports.

To provide permission, please sign the form attached and return it as quickly as possible to the school your child attends. Thank you for your assistance.

Yours truly,

H.C. Rhodes

H.C. Rhodes
Education Consultant
Planning Services

HCR/pag

Attachment

Parental Permission

Permission is hereby granted for observations of activities of my child to be recorded in connection with the evaluation of summer programs for the handicapped. I also agree to provide information as a parent if assistance is requested.

Signed ______________________________ (parent or guardian)

Name of Child ______________________________

Date ______________________________

Is your child participating in a summer program? ______________

If so, where? ____________________ For how long? ____________

If not, why not? ______________________________

If not, what will he/she be doing during the summer? ____________

____

BECAUSE IT SO LATE IN THE SCHOOL YEAR, WE WOULD BE MOST GRATEFUL IF YOU COULD PLEASE RETURN THIS FORM TO YOUR CHILD'S SCHOOL TOMORROW.

Appendix D

Parent and Staff Questionnaires: Comments to Open-ended Items

Appendix D was not included in the copy of this document received by ERIC.